

# LEATH & ROSS,

## WHOLESALE AND EXPORT HOMŒOPATHIC CHEMISTS,

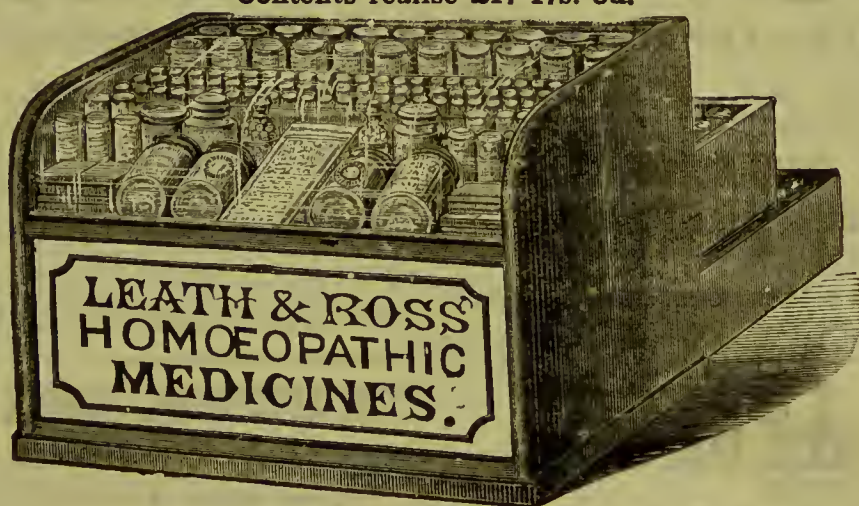
### 9 VERE STREET, W.,

AND AT 5 ST. PAUL'S CHURCHYARD, E.C., LONDON.  
Wholesale and Export Department—9 VERE STREET, W.

**OUR £10 10s. AGENTS' SHOW CASE.**

Contents realise £17 17s. 8d.

DIMENSIONS.—Length, 18 in.;  
Breadth, 13 in.; Height, 13 in.



DESCRIPTION.—A Handsome Bent Glass Case, with three drawers, the contents of top drawer visible, the Pilules and Tinctures arranged in the other two in alphabetical order.

### WHOLESALE PRICE LIST OF MEDICINES PUT UP READY FOR SALE.

PILULES—Sixpenny Bottles	—	2/9 per dozen.	TINCTURES—Sixpenny Bottles	—	2/9 per dozen.
Ninepenny	—	4/-	Shilling	—	5/-
Shilling	—	5/-		—	

Subject to Cash Discount.

### PROPRIETARY ARTICLES.

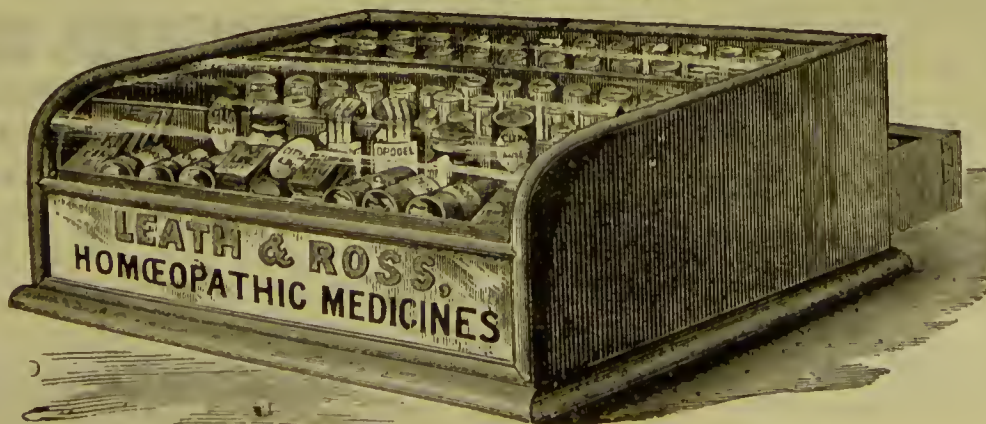
Neuraline	—	1/1½	Berberine	—	1/1½	Linimentum Auricularis	—	1/1½
Glykalline	—	1/1½	Chilblain Liniment	—	1/1½	Bryonia Liniment	—	1/1½
Phospho-muriate of Quinine	1/1½		Odontagie Essence	—	1/1½	Corn Eradicator	—	1/1½

All the above Proprietary Articles, 9/6 per dozen. Subject to Cash discount.

**OUR £6 6s. AGENTS' SHOW CASE.**

Contents realise £10 18s. 8d.

DIMENSIONS.—Length, 20 in.;  
Breadth, 15½ in.; Height, 9½ in.



DESCRIPTION.—A Handsome Bent Glass Case, with two drawers, the contents of top drawer visible, the Pilules and Tinctures arranged in alphabetical order.



# SQUIRE'S COMPANION

TO THE

## BRITISH PHARMACOPŒIA.

Now Ready, Fifteenth Edition, Revised and Enlarged, price 10/6.

*The BRITISH PHARMACOPŒIA compared with Fourteen Foreign Pharmacopœias, also Non-official Preparations of well-known drugs and remedies recently introduced. Medicinal Properties, Therapeutic Index, and references to current literature greatly extended.*

J. & A. CHURCHILL, 11 New Burlington Street, W.

Now Ready. Sixth Edition, 24mo., in limp roan, pp. xii, 485. Price 7s. 6d.

## THE EXTRA PHARMACOPŒIA,

By WILLIAM MARTINDALE, F.C.S., and W. WYNN WESTCOTT, M.B. Lond.

LONDON: H. K. LEWIS, 136 GOWER ST., W.C.

Now Ready, Second Edition, Crown 8vo., price 5s.

## A PRACTICAL MANUAL OF VENEREAL AND GENERATIVE DISEASES:

Including SPERMATORRŒHA, PROSTATORRŒHA, IMPOTENCE, and STERILITY in Both Sexes.

By M. K. HARGREAVES, M.D.

Assistant Physician to St. John's Hospital for Diseases of the Skin.

LONDON: R. KIMPTON, 162 WARDOUR STREET, LONDON, W.

## AN APOLOGY

TO MR. THOMAS BEECHAM,

Proprietor of Beecham's Pills,

ST. HELENS, LANCASHIRE.

SIR,—I beg to express my regret for having sold pills as "BEECHAM'S PILLS," they not being of your manufacture, and I undertake not to do so again.

You are at liberty to publish this Apology in the *Crewe Guardian*, the *Crewe Chronicle*, the *Manchester Guardian*, and the *Chemist and Druggist*, and I agree to pay the cost of such publication and your Solicitors' costs.

Dated this 20th day of  
March, 1890.

Yours, &c.,

WILLIAM BAYLEY,

Chemist and Druggist, 3 EARL STREET, CREWE.

## LONDON HOMŒOPATHIC HOSPITAL AND MEDICAL SCHOOL, GREAT ORMOND STREET, BLOOMSBURY, W.C.

President—THE LORD EMBURY. Chairman—MAJOR WM. VAUGHAN MORAN. Contains 90 Beds, and being entirely supported by Voluntary Contributions, Donations and Annual Subscriptions, are earnestly solicited. The Hospital is always open to the inspection of visitors, and Clinical Instruction is given in the Wards and Out-patient Department to Medical Students and Practitioners. It possesses a valuable Library of Homœopathic Publications, which Medical Men are invited to study. They are also invited to visit the Dispensary. The In-patients number over 700 annually; the Out-patients nearly 9,000 annually. The number of Patients treated since the inauguration in 1849 exceeds 215,000. It has a staff of 12 Nurses for Ward Nursing and Nursing Invalids at their residences.

G. A. CROSS, Secretary-Superintendent.

## THE LIVERPOOL SCHOOL OF PHARMACY, 24 NEWINGTON, LIVERPOOL.

Principal—Mr. J. S. WARD, Ph. Ch., F.C.S., &c.

### COMMITTEE OF EDUCATION

(Appointed by the Council of the Liverpool Chemists' Association).

Mr. C. SYMES, Ph.D., President of the Association.

" T. F. ABRAHAM, } Vice Presidents.

" M. CONROY, F.C.S. }

" A. C. ABRAHAM, F.C.S., F.I.C., Member of the Council of the Pharmaceutical Society.

The Curriculum of this School has been submitted to the Council of the Liverpool Chemists' Association, and is approved of and recommended by that body, whose object in associating itself with the school is to ensure that a thoroughly efficient Pharmaceutical Education may be obtainable in Liverpool, and for this purpose the above committee has been appointed to visit the school from time to time, and otherwise control the course of study.

The success of this School is phenomenal.

The next Course will commence on Monday, April 14.

Syllabus, Pass-lists, Fees, &c., sent free on application to the Principal.

### "CONCILIO ET LABORE."

## THE MANCHESTER COLLEGE OF PHARMACY, 225 & 227a OXFORD STREET, MANCHESTER.

DIRECTOR . . . MR. W. SPENCER TURNER.

Fresh courses of all the Classes will begin on April 21st.  
Fees to July.

Full time Minor Class	...	...	...	£9 9 0
Full time Major Class	...	...	...	4 11 6
Afternoon or Evening Minor Class	...	...	...	3 3 0
Afternoon or Evening Major Class	...	...	...	1 11 6
Once a Week Minor Class	...	...	...	1 11 6

Full Particulars Free on Application.

The Next Session will begin on September 1st.

# "PUMILINE."

EXCLUSIVELY OBTAINED FROM



THE SNOW-CROWN PINE PUMILINE

## "PUMILINE" ESSENCE

Is a specially prepared volatile essence, distilled from a particular variety of pine, growing nearest the snow level on the Alps. It possesses exceptional medicinal properties when given internally, or in the form of inhalations, in the treatment of Pulmonary and Diathetic Affections, such as Phthisis, Rheumatism, Gout, &c. It is a valuable deodorizer and disinfectant, and has a peculiarly refreshing and fragrant odour.

## "PUMILINE" JUJUBES

For Sore Throat, Cough, Hoarseness, &c., they give immediate relief.

## "PUMILINE" LINIMENT

Specially beneficial for use in Chronic Rheumatism, Gout, Lumbago, Sciatica, &c. It is also invaluable for Throat and Chest Affections, and may be taken internally, in doses of 2 to 5 drops.

## "PUMILINE" PLASTER

Is most effective in Chronic and Muscular Rheumatism, Lumbago, Sciatica, and also for Chest Affections.

## "PUMILINE" EXTRACT

For Gout, Rheumatism, and Skin Disease; used in BATHS, Ointments, and Liniments.

## "PUMILINE" OINTMENT

For all Skin Affections, Irritations, Insect Bites, Burns, &c. This Ointment is a fine smooth homogeneous application. It gives immediate relief in the intolerable itching of Eczema, &c. It is unrivalled both as a medicinal agent and toilet requisite.

## "PUMILINE" SOAP

Is a carefully neutralised superfatted Soap, containing no free alkali, and is a Lubricant instead of a Desiccant to the skin. It is peculiarly adapted for use to the delicate skin of ladies and children. It leaves the skin smooth and satiny, and beautifies the complexion. The "Pumiline" Essence which it contains makes it a powerful disinfectant.

## "PUMILINE" DRY INHALER

Most effective and convenient pocket inhaler for use in Throat or Lung Troubles. Is invaluable for use during a fog or mist.

G. & G. STERN have so arranged their Price List that a *very large margin of profit* is left to Chemists and to the Trade generally. In consideration of this, as well as the fact *that no other* Pine Preparations are in any way equal to "PUMILINE," Chemists will find it much to their advantage to stock the "Pumiline" Preparations.

### PRICES—

	RETAIL	WHOLESALE.
"PUMILINE" ESSENCE.....	1/6 and 2/6 per bottle.....	15/ and 24/ per dozen.
"PUMILINE" EXTRACT .....	1/ per bottle.....	9/ per dozen.
"PUMILINE" JUJUBES.....	1/1½ and 2/3 per box .....	10/6 and 20/ per dozen
"PUMILINE" OINTMENT .....	1/1½ and 2/9 per pot.....	11/ and 27/ per dozen.
"PUMILINE" LINIMENT .....	1/1½ and 2/9 per bottle .....	11/ and 27/ per dozen.
"PUMILINE" SOAP...(box of 3 cakes)	1/6 and 9d., and 1/ per tablet.....	15/, 7/6, and 9/ per dozen.
"PUMILINE" PLASTER .....	1/1½ each .....	9/ per dozen.
"PUMILINE" DRY INHALER.....	1/6 each.....	14/ per dozen.

BESIDES WHICH AN ADDITIONAL DISCOUNT IS ALLOWED TO CHEMISTS AND THE TRADE.

**G. & G. STERN, 62 Gray's Inn Road, LONDON, W.C.**

Will send Show Cards and Literature Free on Application.



# EASTER HOLIDAYS—IMPORTANT NOTICE.

Correspondents will please note that for next week's issue of "The Chemist and Druggist," advertisements for insertion in the Exchange Column must reach our Office not later than noon on Wednesday, April 2, 1890.

## EXCHANGE COLUMN.

### TERMS.

Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of 1d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.," and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

#### FOR DISCLOSAL

##### Proprietary Articles.

30 bottles St. Jacobs Oil, 21s. doz. to any Liverpool house for enclosure. Mickle, Chemist, Liverpool.

##### Drugs and Chemicals.

True senna 7d. lb., 28 lbs. 6d.; new camomiles same price; send stamp for sample. Shaw & Co., Doncaster.

23 lbs. gum (sorts), 9d. lb.; 14 lbs. gum myrrh, 1s. 3d. lb.; 3j. good musk, 60s.; 28 lbs. gum kowrie, 6d. lb.; 14 lbs. good gum benzoin, 1s. 3d. lb. J. C., Lichfield, Skelton, R.S.O.

##### Literature.

5 vols., strongly bound, Woodville's "Medical Botany," with original coloured plates; what offers? Gurd, 12 Canonbury Place, Islington, N.

"Therapeutics," Ringer; "Year-book of Pharmacy," 1874-75-76-77-79; "Art of Dispensing," "Progress of Pharmacy"; what offers? Slade, Teubury.

Chemist and Druggist, unbound, 1878, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888 (two numbers short), six and seven months 1879, 1880; lot 20s. Hartley, Chemist, Todmorden.

##### Formulas.

Recipe for self-raising flour; satisfaction guaranteed; 18 stamps. 23/41.

Reliable recipes, 6d. each; full set of 130 neatly copied in book, 7s. 6d.; send for list. "Chemist," Edwards, Wya, Kent.

Brooks' Recipes.—All practical; easily made; pay splendidly.—Toothache cure, seldom fails; Blood Cleanser, excellent preparation; Hop Tonic, costs 1s. lb.; Herbalade, fine aroma, appetising and digestive; Jubilee Sauce, mellow, piquant, appetising, digestive, 6d. pint; Pig Powders, best sold; Ringworm Specific, never fails; Influenza Mixture, sold with confidence; Nursery Lotion (non-poisonous), certain death to ulcers, &c. Recipes 7d. each, 3 for 1s. 6d.; post free also list of 400. Tom Brooks, Chemist, Hornsey, N.

##### Shop Fittings.

3 gross 8-oz. 4-pint bottles; best cash offer. Harvey, Margate.

Handsome open window screen; mahogany dispensing screen, very low price. Sangster, Hampstead.

Glass bottles, job lines.—About 50 gross 3-oz. pale green bottles for corks, suitable for pomade, vaseline, or furniture cream, 4s. per gross; 3 gross 4-pint (reputed) green glass syrups, 7s.; 2 gross pint ditto, 15s.; 3 gross 1-pint white glass syrups, 20s.; 3 gross 2-oz. white globe-necked panels, 7s. Hearn, Bottle Works, 381 Kingsland Road, London.

Special opportunity.—Shop-rounds, new hand-made, English, stoppering warranted, 10 oz., 4s. 6d.; 20 oz. 5s. 9d.; 32 oz., 7s.; 40 oz. 8s. per dozen, wide or narrow mouth; gold-labelling, best style, any names, 2s. 6d. per dozen extra; shop-jars, dome or canopy, very cheap; pill machine, Maw's 5 grals, 24, good condition, 11s.; also shop-fittings, bargains; state wants. "Drug," 83 Campbell Road, Stoke-on-Trent.

Counter case, 6 feet long, bent plate glass, as Maw's A 18, price 54. 10s.; several nests of drawers; 500 labelled shop-rounds, second-hand, 7s. 6d. per doz.; black store bottles, 1s. each; quantity of blue ointment jars, lids damaged, 1s. each; also counters, glass wall-cases, specie jars, carboys, sponge-cases, dispensing screens, and every description of shop-fittings; great bargains. Phillip Josephs, 54 Old Street, Goswell Road, London, E.C.

Clearance sale, job lines.—Shop bottles, 6s. per doz.; blue syrups, plug stoppers, 20 oz. 8s., 30 oz. 10s. doz.; carboys from 2s. 6d. each; 8 specie jars, 18 in. high, 7s. 6d. each; royal arms, 50s. pair; mortars and pestles from 1s.; pill machines, all sizes, from 7s. 6d.; mahogany-fronted dispensing screen and counter, plate-glass tablet, 75s.; counter cases, A 18A, all sizes; wall cases; glass-fronted and other counters; drawers with glass labels and knobs in all lengths; also back fittings, lockers, &c., to match; a large assortment of other useful shop fittings and utensils; great bargains. Natali & Co., 184 Aldersgate Street, London, nearly opposite Maw's. Established 1863.

##### Miscellaneous.

50 dozen soda-water cases; what offers? Bordass, Driffield.

60 lbs. garlic, 4d. lb., small parcels; offers for lot. R. C. Mason, Bromsgrove.

"Enterprise" tincture pills, almost new, 7s. 6d. Henderson, Chemist, Worthington.

Profitable speculation.—Grow lyoscyamus niger; genuine seed, 1s. oz. Flemons, Chemist, Dunstable.

Garlick, 1 cwt. for sale, price 20s.; also 1 bag Peruvian guano, 10s. cwt. Hulme, Chemist, Featon, Staffordshire.

Poppy heads, 5s. 1,000; bag 6d.; sample 3d.; small for crabslag, 1d. lb.; bags 6d. Connor, Chemist, Doncaster.

Microscopic slides, anatomical, pathological interesting; lists and sample free. B., 233 Maida Vale, W.

Magic lantern (large) with about 40 slides complete, value 4l.; what offers? "Chemist," 1 Fore Street, Bodmin.

American ice-cream soda-water machine, with all fittings; highest offer above 12l. 10s. by May 5th secures it. Smith, Chemist, Gosport.

Bargains.—Rover bicycle, Rudge's rear-driving; Rotary tricycle; both new last year. "Chemist," 17 Holte Road, Aston, Birmingham.

Cigars, 20 one hundreds, choice Princesses, 6s., cost 11s.; 10 one hundreds, 10s. 6d., cost 13s. 6d.; 25 fifties, 6s. 3d., cost 8s.; in prime condition, to clear. Slater, Beeston Hill, Leeds.

"Enterprise" mill, 1l.; "Enterprise" press 2s. 6d.; evaporating dish, enamelled iron Maw's 8, 2s.; opium, guaranteed P.B., 13s. lb. Llewellyn, 7 Cloudeley Square, Islington, N.

Job lots of mineral water and other bottles; 100 gross split lemons; 50 ditto 10-oz. square dark coffee extracts; 30 ditto cherry brandy quarts; what offers to clear? M. W. B.

80 lbs. small Tinnivelly senna, 20s. the lot; also mahogany plate-glass floor show-case, 6 ft. by 2 ft. 7 in. by 11 in., and Chappin's daylight reflector, 24 by 24; excellent condition and cheap; particulars S., Market Place, Strand.

#### WANTED.

Freeman's chlorodyne, 2s. 9d. 33/41.

Shop fittings, bottles, show-cases, &c., &c. N., 17 Mildmay Grove, London, N.

Loft's or Stokes' patent check till, second-hand; state price. Apply, 102 Walmgate, York.

Carboys, useful drugs, sundries, &c. Apply. Dr. Smith, 111 Kestons Road, Bermondsey.

2-gr. pill machine, in good order, cheap. State lowest price to Thomas, 50 Queen's Road, Brighton.

5-feet bent-glass counter-case, pill-machine, and set of oil-bottles. Haynes, Chemist, Boscombe, Bournemouth.

An iron mortar, medium size; state price, carriage paid, to G. F. Savage, Carlton Road, Nottingham.

Mortar, capacity about 2 or 3 gallons, marble or otherwise; also stone tap-jars for standards, from 3 to 6 gallons. Address F. T., 50 Richmond Terrace, S.W.

Copies of *The Chemist and Druggist* for March 1, 1890; 4d. each will be paid for copies in good condition. Publisher, THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.



Telegraphic Address—  
BEATROP LONDON."

**NOW READY.**

Telegraphic Address—  
"BEATROP LONDON."

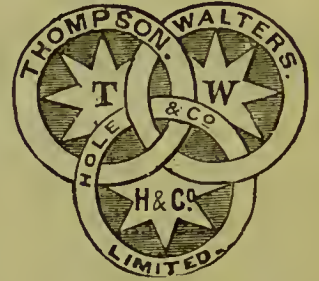
# THOMPSON, WALTERS, HOLE & CO.'S

REVISED ILLUSTRATED

## CATALOGUE

FOR **1890** OF

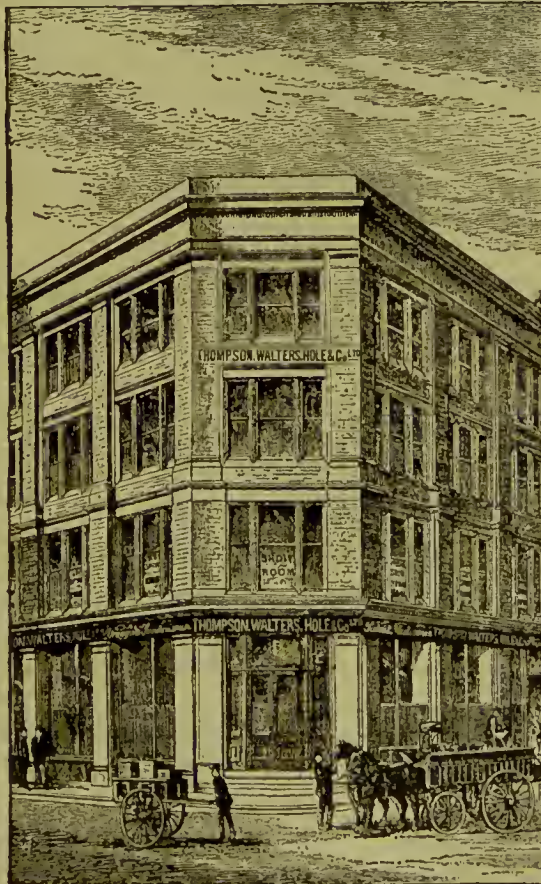
# DRUGGISTS' SUNDRIES



**SURGICAL INSTRUMENTS**

**SHOW CASES**

**SHOP FITTINGS**



**PERFUMERY**

**TOILET REQUISITES**

**PATENT MEDICINES**

FORWARDED POST FREE ON APPLICATION TO ANY PART OF THE WORLD.

SPECIAL TERMS FOR EXPORT AND WHOLESALE ORDERS.

Every attention is given to Export Orders, and Indents sent through Merchants should bear our name.

*Our goods give universal satisfaction, and buyers may, with confidence, favour us with a trial order, and be assured of the most satisfactory results.*

## THOMPSON, WALTERS, HOLE & CO., LIMITED

CURTAIN ROAD, LONDON, E.C.





A GOOD LINE IN DYES  
WILL ALWAYS  
COMMAND A SALE.

DO NOT DELAY! WRITE AT ONCE!!  
And secure a most attractive and saleable Spécialité for  
DISPLAY and WINDOW DRESSING.

## SAUNDERS' BRILLIANT DYES FOR EASTER EGGS.

### LIST OF PRICES.

1d. packets, 7/ per gross.  
Display Card containing 18 doz.  
assorted, for 10 6.

### COLOURS OF DYES.

BLACK	CHARTREUSE
BROWN—	CLARET
LIGHT	CORAL
DARK	CREAM
GOLDEN	CERISE
BLUE—	CRIMSON
LIGHT	CRUSHED
DARK	STRAWBERRY
NAVY	FAWN
ELECTRIC	GOLDEN
BRONZE	YELLOW
BUTTERCUP	GREEN
CANARY	GREY
CARDINAL	



### LIST OF PRICES.

3d. packets, 21/ per gross.  
Display Card, containing 6 doz.  
assorted, for 10 6.

### COLOURS OF DYES.

LAVENDER	PURPLE
LILAC	ROSE
MAGENTA	RUBY
MAUVE	SALMON
MARONE	ECARLET
MOSS	SLATE
ORANGE	STRAW
PEACH	SULTAN RED
PINK	TABAC
PLUM	TERRA COTTA
PONCEAU	TUSCAN
POPPY	VIOLET
PUCE	YELLOW

Specimen of Display Card worked up in brilliant colours—the Dyes attached—the whole in a handsome Gilt Frame.

**THERE IS NOTHING LIKE IT IN THE TRADE.**

A Sample Card of 1d. or 3d., containing the most saleable colours, sent carriage paid on receipt of Postal Order to the value of 10s. 6d. Money returned if the Goods are not approved of.

## ANILINE DYES IN PACKETS.

SPECIALY PREPARED FOR CHEMISTS' TRADE.  
EVERY COLOUR GUARANTEED—BEING THOROUGHLY TESTED BEFORE BEING SENT OUT

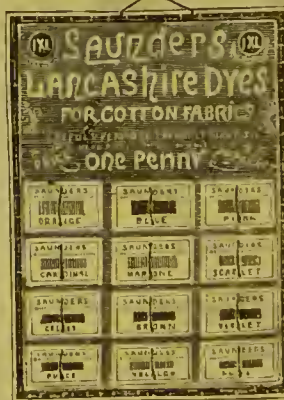


Specimen Card of Dyes for Silk or Wool.



Illustration of our Desk-shape Mahogany Counter Stock-case, with Coloured Tablet in front and Drawer at back—price 54/ net, stocked with Dyes, any colour, equal to 4 gross 1d. and 1 gross 3d. size.

Specimen Card of Registered "Lancashire Dyes" for Cotton.



Litho. Card—Red, White, and on Dark Blue Ground—Varnished.

We are prepared to give Special Quotations (for quantities of 10 gross and upwards) for packed dyes with Customer's own Name and Address on.

### PRICE LIST OF ANILINE DYES IN BULK.

ALL COLOURS WARRANTED TO BE EQUAL IN EVERY RESPECT TO WHAT WE PACK.											
Please Compare the Prices. 1-lb. Sample Tins sent per post. Packed in 1-lb., 1-lb., and 1-lb. Decorated Metal Stock Boxes.											
Black	.....per lb.	9/	*Cardinal	.....per lb.	6/	Grey	.....per lb.	10	Puce	.....per lb.	9/
Brown	.....	5/6	Claret	.....	6/6	Lavender	.....	13/	Purple	.....	9/6
" (Bismarck)	"	7/	" Opt.	"	8/	Magenta	"	8/	Rose	.....	7/
" (Light)	"	4/6	Cream	"	"	Mauve	.....	9/	Ruby	.....	7/6
" (Dark)	"	6/	Crushed Straw-	"	"	Marone	.....	3/3	Salmon	.....	8/
" (Golden)	"	7/	berry	.....	8/	" Opt.	"	6/	Scarlet, No. 1	.....	4/6
Blue	.....	12/	*Cerise	.....	6/	Orange	.....	6/6	" No. 2	.....	9/
" (Light)	"	10/	Crimson	.....	7/	Peach	.....	10/	Slate	.....	10/
" (Dark)	.....	9/	Golden Yellow	.....	10/	Pink	.....	7/6	Sultan Red	.....	7/6
" (Navy)	.....	9/	Green	.....	6/	Plum	.....	6/	Terra Cotta	.....	9/
" (Electric)	.....	15/	" in Crystals	.....	18/	" Opt.	.....	8/	Violet	.....	9/
Canary	.....	7/	" Olive	.....	7/6	*Ponceau	.....	6/	Yellow	.....	7/6

*In the above are omitted in round Tins an allowance of 6d per pound is made.*

If the above are supplied in round Tins, an allowance of 6d. per pound is made.

All the colours marked \* are special preparations of our own, and will be found very superior, both for brilliancy of colour and economy in use.

SOLD BY CHEMISTS AND DRUGGISTS ONLY; WHOLESALE FROM  
**AYRTON & SAUNDERS, Dye Merchants, 149 Duke St., LIVERPOOL.**

Agents—W. EDWARDS & SON, 157 Queen Victoria Street, E.C.





A Copy of this Supplement is inserted in every number issued of "The Chemist & Druggist."

# The Chemist and Druggist

## SUPPLEMENT

Businesses Wanted.  
Businesses for Disposal.  
Premises to Let.  
Auction Sales.

SATURDAY, MARCH 29, 1890.

Partnerships.  
Situations Vacant.  
Situations Wanted.  
Miscellaneous.

### EASTER HOLIDAYS—IMPORTANT NOTICE.

Advertisements to appear in the next issue of this Supplement must reach our Office not later than first post on Thursday morning, April 3.

The Offices of "The Chemist and Druggist" will be closed after Thursday, April 3, until Tuesday, April 8.

### CHEMISTS' TRANSFERS.

#### MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

##### CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

The business conducted by Messrs. ORRIDGE & Co. has been known as a Transfer Agency since the year 1843, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion of value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

1.—£800.—LONDON, S.E.—Retail and Prescribing, situate near busy district; returns £800 yearly; *very profitable*; good house, with private entrance; price £750.

2.—£500.—LONDON, S.W.—Old-established Business, situate in a good-class locality; present returns £500 yearly; all full prices; well-fitted shop, with private entrance to house, which is a good one, he'd on lease at very moderate rental; easy terms.

3.—£700.—LONDON, S.W.—Near Belgrave Square; very nicely-fitted shop; good-class Retail and Dispensing; easily extended by a pushing man; returns £700 yearly; very easy terms to a cash buyer.

4.—£300.—LONDON SUBURB, S.—An established good-class Business, well suited for a branch; has been for some time under an assistant; returns £300 from good-class dispensing and retail; pretty locality; good house and garden; price £200.

5.—£400.—LONDON, N.—Retail and Prescribing; returns over £400 yearly; *net profit nearly 50 per cent.*; comfortable house, low rental; price £370.

6.—£400.—LONDON, N.—In a pretty locality, main road; handsomely fitted shop; returns about £8 per week with indifferent attention; price less than the value of stock and fixtures, £500.

7.—£800.—LONDON, N.W.—Retail and Dispensing; returns over £800; good profitable business; good sized house and garden; price £450.

8.—£550.—MIDDLESEX.—In a very good-class suburb; Retail and Dispensing Business; returns over £550; corner shop, well stocked; comfortable house, moderate rental; price £450.

9.—£500.—KENT.—Death vacancy; Retail and Prescribing; old-established concern; returns about £500 yearly, can easily be increased; good-sized house, with private entrance; price to be arranged; offer wanted.

10.—£1,300.—SOUTH COAST.—Fashionable town; handsomely fitted corner shop, in prominent position; returns £1,300 yearly; full particulars on application; about £1,100 required.

11.—£800.—CRYSTAL PALACE (near).—Very good class Dispensing and Retail; returns over £800 yearly; good house and garden; price £700.

12.—£800.—DEVON.—Commercial town; good business locality; *very profitable* Business; returns £800 yearly; large house; price £500.

13.—£300.—SUBURB, N.W.—Prescribing and Retail; returns £300 yearly, easily can be increased; comfortable house and good-sized garden; about £250 required.

14.—£500.—NEAR BRIGHTON.—Retail and Dispensing; returns nearly £500 yearly; *very profitable* business; large, well-fitted shop; good house and garden; rent low; price £450.

Particulars of any of the above will be furnished on application.

**N.B.—NO CHARGE TO PURCHASERS.**

Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION.

Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the especial attention of a London agent.

### SPECIAL NOTICE.—TO PRINCIPALS AND ASSISTANTS.

MESSRS. ORRIDGE & Co. Register Vacancies for Situations FREE OF CHARGE.

ORRIDGE & CO., 32 Ludgate Hill, LONDON, E.C.

### SALE BY TENDER.

ST. MARY'S HOSPITAL, W.  
CONTRACT FOR DRUGS AND CHEMICALS.

THE Governors are prepared to receive tenders for the supply of Drugs and Chemicals for three months ending July 15 next.

Form of tender can be obtained at the Secretary's Office. Tenders must be delivered in sealed envelopes, accompanied by samples when so required, addressed to the undersigned, marked "Tender for Drugs," on or before Saturday, April 5. The Governors do not bind themselves to accept the lowest or any tender.

March 25, 1890.

(By order) THOMAS RYAN,  
Secretary.

### FOR SALE.

PARCEL Patent Medicine, "saleable"; list on application; value about £4. Address, 41/25, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

FOR SALE, an Air or Water-bed, by Hooper, with bellows; used only one month, case of heart disease, good as new; cost net £13 10s 9d; price £3 8s. Apply, Walter E. Paine, Chemist, Cambridge.

FOR Sale, to close a Bankruptcy Estate, 4 8 gallon Carboys on mahogany stands, several large Show Bottles, over 400 Blue Labelled Jars, and Glass Stopped Bottles of various sizes; to be sold privately. J. W. G. Brewer, Auctioneer, Gloucester.



# F. J. BRETT, VALUER, LEICESTER, 60 St. Stephen's Road.

References to principal London and Provincial Wholesale Houses, also to numerous clients throughout the United Kingdom.

## BUSINESSES THOROUGHLY INVESTIGATED FOR BUYERS 20 YEARS' EXPERIENCE.

**LANCASHIRE.**—Returns £1,600 to £1,700; large town; General Retail; good Prescribing and fair Dispensing; price about £850.

**KENT.**—Light Retail, Dispensing, and Prescribing, with good Specialties; returns £850; good house; low rent; price £800.

**LINCOLNSHIRE.**—Light Retail and Prescribing, with Wines, Spirits &c.; returning about £1,500; price about £800.

**YORKSHIRE.**—Returns £550, under personal attention were £1,000; good position; population 30,000; valuation about £400.

**BIRMINGHAM.**—Retail, Prescribing, and Dispensing; rent low; returns over £600; price about £550.

**SUSSEX.**—Dispensing and Light Retail at full prices, at pleasant seaside town; returns £500; price £450.

**MIDLANDS.**—Unopposed Light Retail and Prescribing; returns £320; can be doubled; fully half net profit; large population; no chemist for four miles; large and productive garden; nominal rent; price £270.

## BUSINESSES FOR DISPOSAL.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

**I**N one of the best suburbs of London.—Small Retail, Dispensing, and Prescribing Business for immediate disposal; good shop, well fitted; good opening for dentistry; no reasonable offer refused; good house; inspection invited. Dawson, 45 High Street, Sydenham, S.E.

**G**OOD Market and Manufacturing Town in West of England.—Old-established Business in best part of town for sale; in present hands is rapidly increasing, proprietor taking larger business; present returns £8 or £9 weekly; price £320 cash, or reasonable offer. J. Bate, 12 Werburgh Street, Chester.

**C**APITAL opening for Business in rapidly rising seaside town; sold owing to ill-health of proprietor—the cause of the low returns; splendid fittings, cost £300, and fair stock; a bargain for £200; rent to be made by letting in season; healthy place. 39/13, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**B**ARGAIN.—£400 will purchase a good 7-roomed House and Garden, and the Goodwill, small Stock, and complete Fittings of a Retail and Prescribing Business in a growing suburb of Bath; established 17 years; has been neglected, and capable of great extension. E. W. Lovelace, Newbridge Road, Lower Weston, Bath.

**C**HANCE seldom met with.—London, S.W.—Chemist, Dentist, and Botanic Practice; old-established; main road; rent £55, on lease; good botse and shop, let off 13s.; good stock, &c.; returns about £400; last price £100, a bargain; cause of leaving, country branch. Address, "Botanic," Walker & Troke, 82 City Road, London.

**F**OR immediate disposal, small Dental Practice doing over £200 per annum; could be trebled by resident; suitable to Registered Chemist; reason given for disposal; payment could be arranged; instruction given if necessary; introduction, &c.; very healthy town; inhabitants about 15,000, and select. "Dr," 5 Railway Street, Beverley.

**B**IRMINGHAM (suburb).—Light Retail, Dispensing and Prescribing Business; situated in a prominent corner position in one of the best suburbs; rent £30, worth £50; excellent house, bath-room, &c.; returns £650, steadily increasing; price £500. Photo, and full particulars, of "Sodium," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**S**UBURBAN Business for immediate sale, doing a Light Retail and Dispensing Business, situated in one of the most pleasant suburbs of London, 6 miles out; returns £820; good house and premises; price £650; every investigation allowed to bona-fide cash purchasers. "Sella," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**V**ILLAGE BUSINESS in Gloucestershire, returning over £700 per annum; rent £28; own property; will sell or grant lease; modern 9 roomed house; price to an immediate purchaser £375; unusual opportunity, simply value of stock and fixtures; full particulars sent on application. "Severn," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**D**EATH VACANCY.—For Sale, old-established Chemist's Business; centre of large agricultural and aristocratic neighbourhood, over 3,000 inhabitants; no opposition; full prices; two large cattle auctions held fortnightly; good house and garden; double-fronted shop, large enough to combine two businesses; low rent; low take. Address, Mrs Lawrence, Ponkridge, Stafford.

**F**OR immediate disposal, owing to ill-health, an old-established (1840) Business in the Northern district; Prescribing and Retail; main road, corner shop, side entrance; house well adapted for letting, and could be managed by manager; good opening for Dentistry; takings nearly £9 per week. "Chemist," care of W. S., 66 Stainby Road, Lincoln, E.

**C**HEMIST'S Business in capital position in large and rapidly growing town in West of England; modern and beautifully fitted shop, with dwelling accommodation over; rent £60; no rates or taxes; fixtures and fittings at valuation; stock optional; satisfactory reason for relinquishing. Agents, Wansbrough & Sons, Auctioneers, Estate Agents, Business Brokers, Weston-super-Mare.

**S**UBURBAN Business, capable of great improvement; position and fittings exceptionally good; neighbourhood developing rapidly; price £300. Apply, Mr. A. H. Solomon, 75 Holland Road, Kensington, London.

**T**O Chemists and Druggists.—For sale, in consequence of the death of the proprietor, an old-established Business in one of the leading thoroughfares of Maldstone, near railway-station. First-rate shop, with dwelling-house. Apply to Day & Sons, Valuers, &c., 23 High Street, Maldstone.

**O**LD-ESTABLISHED Drug and Grocery Business, in principal street in Darlington, with large double-fronted shop, well-fitted and commodious house, carried on successfully 25 years by the late J. O. Thompson Chemist and Grocer, a profitable trade done in each department; satisfactory reasons for disposal; splendid opening for qualified chemist. For particulars, apply to Mr. Thompson, 12 Blackwellgate, Darlington.

## BUSINESSES WANTED.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

**W**ANTED, a Mixed Chemist's Business in country market town in agricultural district, preferably in the North of England; must bear strict investigation. Full particulars to A. B., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**W**ANTED, at once, a small Business; seaside preferred, but good country town or large village not objected to; cash ready. Communications, with all particulars in strict confidence, to "Sanitas," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**A**DVERTISER is open to purchase a good-class Retail and Dispensing Business, returning about £1,000 per annum; South of England preferred, but not essential; must bear the strictest investigation, and preference given to one where short trial would be allowed. Address, "Pharmaceutical Chemist," Skewkirk Hall, Tockwith, Yorks.

## TO LET.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

**A**CHEMIST'S Shop and Business to be Let, at Potter's Bsr, Middlesex. Address, James Bint, Builder and Contractor, Little Berkhamstead, Hertford, Herts.

**C**HELTENHAM.—To Chemists.—To let, immediately, in busy part of High Street, good Shop fitted complete with Chemist's fixtures; incoming about £100; good house. For all particulars apply, A. J. Atkins, 83 High Street, Cheltenham.

**S**HOP to be Let; commanding position in the best part of Holborn; suitable for a Wholesale house, and any business requiring good window space. Also a capital First Floor, very light and lofty; good entrance; suitable for Chemist's or Patent Medicine Agents. Apply Drew & Cudman, 245 High Holborn.

**C**HEMIST, Druggist, and Dentist wanted for a populous neighbourhood; shop recently very much improved, where business has lately been carried on for 50 years; central position; good opening for Surgeon; a capable and energetic man would find here an excellent opportunity; rent moderate. A. Bryant, Netter Stowey, Bridgwater.

**W**EST GREEN ROAD, TOTTENHAM (near Christ Church).—First-class Shop and House to be Let (vacant at Michaelmas next) as Chemist's and Druggist's; rental £50 per annum; premium £100, or can be sold for £700; ground rent £9; long lease; main business thoroughfare. Apply to owners, A. M. Smith & Co., Estate Offices, West Green Road, Tottenham.

## PARTNERSHIP.

**A**GENTLEMAN, proprietor and manufacturer of valuable Patent Medicines in good demand, desires to meet Capitalist with 1,000L to 2,000L at disposal for purposes of advertising and extending; capital under introducer's full control; principals only. Messrs. Anyon & Sheldermine, Accountants, 57 Princess Street, Manchester.

## APPRENTICESHIP.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

**A**N educated youth as Apprentice. Apply to J. A. Seys, Chemist and Druggist, Newport, Mon.

**A**N Apprentice, in old established business; comfortable home; moderate premium required. James Stevens, High Street, Strood, Rochester.

**A**PPENTICE, in a good Family and Dispensing business; every facility for acquiring thorough knowledge of the different branches of the trade under personal supervision of proprietor; must be gentlemanly and a neat writer; time for study and recreation; premium; 3 years; indoors; £75. Bally, Pharmaceutical Chemist, Ramsgate.



## SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

**WANTED**, a Junior Assistant for Light Retail and Dispensing business. R. Hiseock, Coventry.

**WANTED**, a Junior Assistant for a Light Retail business. Apply with full particulars, Roberts, Mill Street, Kildorminster.

**JUNIOR ASSISTANT** (about 22); if able to extract teeth preferred; must have good references. Apply personally, or if by letter send full particulars, to "Chemist," 189 Wandsworth Road, S.W.

**TO** Manage a Branch; age about 25, energetic and steady man wanted; letters not answered in 3 days declined; state full particulars. Thos. Haigh Connor, Chemist, Doncaster.

**WANTED**, Branch Manager, married; house (unfurnished) and gas free; state age, height, references, salary required, and enclose photo to J. F. Harston, Chemist, Lincoln.

**DENTAL** Pupil, tall, gentlemanly, mechanically inclined, with premium; established 12 years. Mr. Hoare, 208 Goswell Road, or Lighton Buzzard, or Hertford. (Thorough instruction in the mechanical department given by myself)

**TO DISPENSERS**.—Wanted at once, a qualified man (outdoors); short hours; no Sunday duty. Apply by letter, stating age and salary required, to F. J. B., 136 Queen Victoria Street, E.C.

**I ZOD & SON**, Church Road, Upper Norwood, require a Qualified Assistant, of gentlemanly appearance and address, for a first-class dispensing business; only one kept; aged about 25.

**C. F. LOGGIN**, Stratford-upon-Avon, is in immediate want of a good Assistant in a Light Retail and Dispensing business; only one kept; enclose photo (to be returned), age, references, &c.

**WANTED**, two qualified Chemist's Assistants, one for the East Indies and one for West Indies; single; passages paid out. Apply to B., care of Barclay & Sons, Limited, 95 Farringdon Street.

**ASSISTANT** wanted for the Scientific and Photographic Apparatus department (outdoor); state age, experience, reference, and salary required to Box 206, General Post Office, Newcastle-on-Tyne.

**IMMEDIATELY**, as Manager to a Mixed Country Business (Branch); Qualified; good Prescriber, Teeth Extractor; married; references. H. A., Willows, Francis & Butler, 101 High Holborn, W.C.

**BY** 21st April, or earlier, Junior Assistant in good-class Retail and Dispensing. Particulars, references, and carte, if convenient, to S., 54 High Street, Stroud, who has also a vacancy for an Apprentice.

**ASSISTANT** for good-class Country trade; good Dispenser and Counterman; Wesleyan and total abstainer preferred; state age and salary required. A. Upson (late Walker & Son), Maidenhead.

**IMMEDIATELY**, Junior Assistant; one accustomed to a good-class country trade; reliable dispenser; active and obliging. Apply, stating age, experience, salary required, with photo, to W. M. Turner, St. Ives, Hunts.

**J. C. POTTAGE**, Homœopathic Chemist, 117 Princes Street, Edinburgh, is in want of an active and obliging Assistant (outdoors); a knowledge of homœopathy not essential; state salary; enclose photograph and references.

**A QUALIFIED** Assistant in a first-class London house; a man with good country experience not objected to; state age, height, and salary required, enclosing photo, to X. Y. Z., care of Lauger and Sons, 489 Oxford Street, W.

**WANTED**, an Assistant; unmarried; to sleep on premises; board out; good salesman and fully competent to dispense. Apply, giving full particulars, and state salary expected; enclose c.d.v. Kiloh & Co. (Limited), Cork.

**CANE SUGAR BOILER**.—Wanted, for a British Colony, a mechanic who can superintend the sugar-house; must be able to use the polariscope and to test juice. Apply by letter to D. P. 241, care of Messrs. Deacon, Leadenhall Street, London.

**ON** April 13, a competent Assistant, of good address and gentlemanly appearance, not under 24. Apply, stating age, height, references, and salary required (indoors), enclosing carte, to George Shepperley, Pharmaceutical Chemist, Market Place, Nottingham.

**TRAVELLERS** wanted, to sell Carter's Universal Bird Seed, in Liverpool, Birmingham, Newcastle, Bristol, York, and other large centres; must have good connections with first-class grocers, &c. Apply to B. S., James Carter & Co., 237-8 High Holborn, London, W.C.

**WANTED**, for a Light Retail, a Junior or Improver, or a part-time Assistant treated with; indoors; time allowed for recreation; alternate Sundays 6-9.30 P.M. only; comfortable berth for a suitable man. Photo and particulars to Albert Pellew, 374 Old Kent Road, London, S.E.

**WANTED**, a smart active Assistant, aged about 23 (outdoor), for a pushing Retail and Prescribing business. Applicants are requested to state full particulars as to age, height, and salary required, enclosing reference and carte (to be returned). Cartwright, 69 Leytonstone Road, Stratford, E.

**ACTIVE** and Energetic Assistant, outdoors, seeking a permanency, for parcels counter; duties are to put up and despatch all outgoing retail orders; one with knowledge of Mixed or Agricultural trade preferred; state age, height, salary required, and enclose photo. S. Waud, Chemist, Leicester.

**JUNIOR** or Improver; about 20; outdoors. Apply, with full particulars. J. J. Leigh, 5 Nowgate Street, Bishop Auckland, Durham.

**A QUALIFIED** Assistant; good dispenser. Send photo, and apply, stating age, height, &c., to C. Amore, Chemist, 6 Castle Street, Hastings.

**WANTED**, immediately, an Assistant (outdoors) for a light Retail and Dispensing business. State full particulars to Mr. Nichols, Chemist, Petersfield.

**WANTED**, Assistant (indoors) accustomed to good-class country business; state usual particulars and enclose photo. Phillips, Chemist, Newport, Mon.

**IMMEDIATELY**, gentlemanly Assistant, about 25; qualified; well accustomed to good Dispensing business. Apply, with carte and usual particulars, Jamieson & Curtis, Hastings.

**TO** Parents and Guardians.—Wanted, two Youths to learn Mechanical Dentistry. The Ladies' Dental Institution, Registered (Partridge's), 43 Sussex Place, Old Brompton Road, S.W.

**WANTED**, an Assistant, 21 to 23 years of age, with good references; one used to a country business preferred. Particulars and salary required, to F. W. Parkinson, Atherstone.

**WANTED**, at once, Junior Assistant (outdoor); no Sunday duty; hours 8 to 7. State full particulars as to salary, references, and photo, if convenient, to B. Newham, 27 King Street, Sheffield.

**WANTED**, in a mixed business, Junior Assistant; time for study; small salary; no Sunday duty; veterinary practice included. State full particulars and age, to W. H. Bell, Medical Hall, Banwell.

**WHOLESALE**; Clerk accustomed to bookkeeping and general office work; state age, salary required, and experience. Address, "Desk," care of Wertheimer, Lea & Co., Circus Place, London Wall, E.C.

**WANTED**, Junior Assistant for Mixed Country business; easy hours; no Sunday duty. Send references and salary expected, also photo (which shall be returned), to "Manager," 5 Norfolk Street, King's Lynn.

**AN** Assistant, indoors, as early as possible; qualified preferred, and not under 22; must have been used to a good-class Dispensing trade. Apply, with usual particulars and salary required, to "Omega," 489 Oxford Street, W.

**WANTED**, Junior Assistant (indoor); good counterman and dispenser; Mixed Business; Protestant and abstainer preferred; unexceptionable references required; photo, to be returned. Apply, J. B., 32 Victoria Road, Widnes.

**WANTED**, for a good-class Family and Dispensing business, a gentleman with good experience and references, not under 23 years of age; in or out doors; four kept; enclose carte, with full particulars. Padwick, Pharmacy, Redhill.

**A CONFIDENTIAL**, good, all-round Assistant, capable of taking charge if required; must be a good Counterman and active man of business; indoors. Send photo and particulars to E. A. Holloway, Chemist, The Parade, Leamington.

**JUNIOR** Assistant wanted for Front Counter; outdoor; Minor; one accustomed to Store Trade preferred; no Sunday duty; salary £2. Send photo and full particulars to "Norway," Messrs. Baiss Bros. & Co., Jewry Street, Aldgate, London, E.C.

**WANTED**, a qualified Assistant for best-class Dispensing business; age about 23. Apply, stating height, age, salary required, giving references, and enclosing carte, to Geo. B. Perry, Pharmaceutical Chemist, 171 Hagley Road, Edgbaston, Birmingham.

**TO** Druggists and Medical Assistants.—An intelligent man willing to invest £20 to £30 can obtain a permanent situation; salary £1 per week; commission on sales; house, gas, and water free; by letter only. J. Street, 5 Goodman Street, Burton-on-Trent.

**WANTED**, after Easter, an Indoor Assistant for Light Retail and Dispensing Business; one having a knowledge of Photographic Apparatus and Chemicals preferred. Apply, stating salary expected, age, height, and usual particulars, to P. Hall, 118 Grey Street, Newcastle-on-Tyne.

**WANTED**, on April 8 next, a Qualified (Minor) Assistant, aged about 24 years, of experience; good dispenser and counterman; with good references; state salary; indoors; comfortable home. Apply by letter to M. D., 606 Harrow Road, W.; or personally between 6 and 8 P.M.

**WHOLESALE** Assistant required for putting up Surgeons' orders; must have had good experience in a Wholesale House, and understand ordinary Laboratory work; if with knowledge of Pill Coating preferred; state age, references, and enclose photo, to W. T. Hicks, Glynrhondda Street, Cardiff.

**WANTED** immediately, a steady, careful Junior Assistant (outdoors) for a good-class Dispensing and Family Retail; short hours and no Sunday duty; must have unexceptionable references. Address, with full particulars of age, height, and salary required, to "Alpha," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**HULL ROYAL INFIRMARY**.—There is an opening in the Dispensing Department of the above Institution for a gentlemanly youth, about 16 years of age, for a term of not less than 3 years; one who has passed the Preliminary examination of the Pharmaceutical Society preferred; an excellent opportunity is afforded of learning Pharmacy and Dispensing under a qualified pharmaceutical chemist; premium £40. For further particulars apply to the undersigned at the hospital. By order, Benjamin Brooks, Secretary.



**DIRECTLY** after the Easter holidays, a reliable and competent Qualified Assistant for good country business; hours 8 to 2.30, Saturday 10; night and Sunday duty merely nominal, one evening a week; liberal terms to a really good man; Churchman essential; please enclose carte. C. E. Wilkinson, Hemel Hempstead, Hertfordshire.

**ENERGETIC** Assistant (about 22), and possessing good references, for Light Retail; indoors; one only kept; applicants, please state in first letter age, height, previous experience, if able to extract teeth, salary required, when disengaged, and enclose carte (to be returned). A. Higgs, Chemist, Kingston, S.W.

**IMMEDIATELY**, an energetic Assistant and good Counterman for busy Retail and Dispensing; Drug Store experience not objected to; abstainer preferred; hours 9 A.M. till 7 P.M. (Saturdays 10 P.M.), no Sunday duty. Apply, stating salary required (outdoor), and other particulars, to Francis Spite & Co., Limited, St. Enoch Square, Glasgow.

**ASSISTANT** wanted; outdoor; qualified preferred, but not essential; aged from 21 to 25; one who has been accustomed to a good all-round trade. Apply personally to Gardner, 485 King's Road, Chelsea.

## SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

**AFRICA** (23); qualified; experienced in all branches. B., 11 Bedford Street, Ipswich.

**ASSISTANT** or Dispenser; London; in or out door; 25. Lloyd, High Street, Brecon.

**JUNIOR**; 21; 3 years' good experience; Northern counties. C. W. L., 95 High Street, Putney.

**OUTDOOR**; experienced; aged 27; qualified; South preferred. W. M., 25 Ugate, Louth, Lines.

**TEMPORARY**; aged 27; qualified; references. "Cortex," 10 Richmond Street, Southwark, S.E.

**JUNIOR** (21); Manchester; time for study; no salary. "Cbemicus," 25 Lime Street, London, E.C.

**AS OUTDOOR**; view succession or otherwise; qualified; competent. G., 60 Calabria Road, Highbury.

**TEMPORARY**, or otherwise; day or week; good references. "Radix," 115 Barnsbury Road, N.

**ASSISTANT**; good experience and highest references; disengaged. W. R., 8 Lower College Green, Bristol.

**ASSISTANT**; aged 23; 7 years' experience; Wesleyan. Broadley, 11 Eastfield Road, Louth, Lincolnshire.

**AS Assistant** or Branch Manager; good references and experience; aged 27; qualified. H., 105 King's Cross Road.

**DISPENSER**, Hospital Surgeon, or Locum; good testimonials; disengaged. "Dispenser," 47 Wycombe Road, Tottenham.

**AS Junior**; London experience; moderate salary, as applicant has been out of trade for short time. W., 8 Avery Row, New Bond Street.

**M. R. S. SMITH**, 6 Shaftesbury Terrace, Ashley Road, Bristol, takes Confidential Management during absence or illness, or Branch; varied experience.

**WHOLESALE**, Wet Counter; 17 years' practical experience; aged 33; disengaged. "Tenax," 60 Lincroft Road, Coburg Road, Camberwell, S.E.

**ASSISTANT**; aged 22½; tall; 5½ years' experience; outdoors; extractor; disengaged April 10. With particulars, to Poulter, 129 High Street, Guildford.

**ASSISTANT** or Manager; aged 26; Minor; permanent; outdoor; speaking German fluently; extract; good photographic knowledge. "Chemist," 2 Carr Lane, Hull.

**OUTDOOR**, as Manager or Senior; aged 30; height 5 ft. 7 in.; thoroughly experienced in all classes of trade. Address, "Minor," care of Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**COMPETENT** Chemist requires position as Manager or Senior (out-door); all-round experience; Stores not objected to. Address, "Rhel," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**TO** Chemists and Aërated-water Manufacturers.—A Chemist's son, married, thoroughly well up all round, is open to an engagement as Working Manager; undeniable references. D., 137 Queen's Crescent, N.W.

**WANTED**, Charge of Pharmaceutical Laboratory, or Chemical Manufactory; thorough knowledge of all branches; aged 30 years; qualified; M.P.S. "Ramal," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**WHOLESALE**, or in London foreign retail; disengaged April 21; qualified (27); 18 months in French pharmacies; good knowledge of language; office and warehouse experience in wholesale. Price, Pharmacia Farant, Mentone.

**ENERGETIC** Assistant, not qualified; 20 years' experience; single; 35. "statim," 12 Chapel Street, Uxbridge.

**ASSISTANT**; Mixed country Business. 41/12, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**LOCUM-TENENS** during absence; long experienced; gentlemanly address; moderate terms. "Ph. Ch.," 39 Powis Square, W.

**MANAGER** or Junior Partner; 15 years' experience; Manchester or district preferred. Stocks 87 Bynor Street, Cheetham, Manchester.

**JUNIOR**, as Traveller, or Part Traveller, in good Mixed Wholesale and Retail business; aged 27; good accountant; first-class references. Shuttleworth, Silver Street, Gainsborough.

**IRELAND**.—Wholesale Drug Trade.—A gentleman with a large connection, and well known in the drug business, is open to treat with an A1 London firm, to represent them in Ireland, either on salary or commission; a large business guaranteed. Address "Drug," care of Eason & Son (Limited), Advertising Agents, Dublin.

## MISCELLANEOUS.

Special charges are made for Advertisements under this heading, which can be obtained on application.

**PROPRIETARY** Articles.—Wanted to Purchase. Must show good profits. Apply, by letter, to J. S., care of Mr. Ponting, 40 Aldersgate Street, London, E.C.

**TURNED** Wood Boxes in all sizes and for all purposes, for Ointment and Drugs. Apply to Karl Klostermann, Unter-Reichenstein, Boehmerwald, Austria.

**PERSONS** wishing to Purchase or Sell their Businesses will do well to communicate with Messrs. Fowler & Miller, Chemists' Transfer Agency for the North of England, 60 Fawcett Street, Sunderland.

### PRELIMINARY AND MINOR.

**ALL** Students who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. Student's Herbarium, 100 specimens, 7s 6d., post free.

### STUDENTS' AIDS TO EXAMINATION.

**PRELIMINARY**.—Arithmetic and Metric System, 1s. How to Write an Essay, 3d. Caesar Simplified, 1s. Knotty Points in Latin Grammar, 1s. 6d. **MINOR**.—Equations Simplified, 1s. Illegible Autographic Prescriptions, 1s. Notes on Dispensing, 1s. Prescriptions given at the Minor, 6d. "Chemist," care of Mr. J. Edwards, Wye, Kent.

## OUR WEEKLY SUPPLEMENT.

We have prepared a set of forms for small advertisements (assistants wanted, businesses for disposal, exchange column &c.). With these are attached tables of useful reference matter (Sale of Poisons, Postal Information, Annual Licences, Metric Weights, Measures, Medicine Stamps, Law and Public Offices, &c.). We shall be glad to send one of these sets to any subscriber who will send us an addressed postal wrapper (bearing a halfpenny stamp). As the object of this production is to encourage the insertion of such advertisements as we have named in THE CHEMIST AND DRUGGIST, we hope this offer will be taken advantage of chiefly by those subscribers who are willing to use this journal whenever opportunities occur.

**OFFICES: 42 CANNON STREET, LONDON, E.C.**



# RE CUTTERS.

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Where Chemists find that our goods are being cut extremely we should deem it a special favour if they would inform us of the fact.

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Pictures  $4\frac{1}{4}$  by  $3\frac{1}{4}$  inches.

Carries  
12  
Dry Plates,  
no  
Dark Slides.  
Plates changed  
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The most  
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Price, with  
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Shutter,

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## "OPTIMUS" PHOTOGRAPHIC SETS

With Tripod and every necessary complete.

For Plates

 $4\frac{1}{4}$  by  $3\frac{1}{4}$ 

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For Plates

 $6\frac{1}{2}$  by  $4\frac{3}{4}$ 

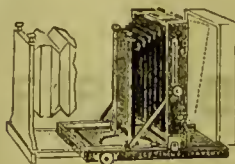
£5 15s.

For Plates  $8\frac{1}{2}$  by  $6\frac{1}{2}$ , £9 10s.

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"Working as it does with  
such a large aperture (f/6  
approx.), it serves as a por-  
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as a landscape and copying  
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of its proving a most useful  
lens."—J. TRAILL TAYLOR,  
"British Journal of Photo-  
graphy."

"We are pleased to find  
upon trial that the Lens  
("Optimus" Rapid Rectili-  
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an EXCELLENT INSTRU-  
MENT."—"Photographic  
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"I should strongly recom-  
mend Rayment's Camera.  
It is LIGHT, COMPACT, very  
Rapid, and extends to about  
double the usual focus."—  
"Amateur Photographer."

## "Optimus" Rapid Euryscope.

5 by 4, 63/-; 7 by 5, 94/6; 9 by 7, 126/-; 10 by 8, 220/-

## "Optimus" Rapid Rectilinear.

$\frac{5}{4}$	$\frac{6}{5}$	$\frac{7}{6}$	$\frac{8}{7}$	$\frac{9}{8}$	$\frac{10}{9}$	$\frac{11}{10}$	$\frac{12}{11}$	$\frac{13}{12}$	$\frac{14}{13}$
33/-	45/-	49 6	64/-	82 6	127 6	142 6	180/-	225/-	

## "Optimus" Wide-Angle Symmetrical.

$\frac{5}{4}$	$\frac{7}{6}$	$\frac{9}{8}$	$\frac{10}{9}$	$\frac{12}{11}$	$\frac{13}{12}$	$\frac{14}{13}$
39/-	52 6	82 6	127 6	142 6	180/-	225/-

## "Optimus" Quick-Acting Portrait.

Diameter	2 inches.	2 $\frac{1}{2}$ inches.	3 $\frac{1}{2}$ inches.
Price	90/- (1 B)	120/- (2 B)	180 (3 B)

## Rayment's Patent Camera (Long Focus).

Price includes 3 Double Dark Slides.

$4\frac{1}{4}$ by $3\frac{1}{4}$	120/-	5 by 4, 126/-	$6\frac{1}{2}$ by $4\frac{3}{4}$	145/-	$8\frac{1}{2}$ by $6\frac{1}{2}$	168/-
10 by 8	212/-	12 by 10	258/-	15 by 12	314/-	

## "Optimus" Camera (Long Focus).

Price includes 3 Double Dark Slides.

$4\frac{1}{4}$ by $3\frac{1}{4}$	130/-	5 by 4, 133/-	$6\frac{1}{2}$ by $4\frac{3}{4}$	137/-	$8\frac{1}{2}$ by $6\frac{1}{2}$	175/-
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## Wide-Angle Camera (Long Focus).

Price includes 3 Double Dark Slides.

$4\frac{1}{4}$ by $3\frac{1}{4}$	140/-	5 by 4, 146/-	$6\frac{1}{2}$ by $4\frac{3}{4}$	165/-	$8\frac{1}{2}$ by $6\frac{1}{2}$	188/-
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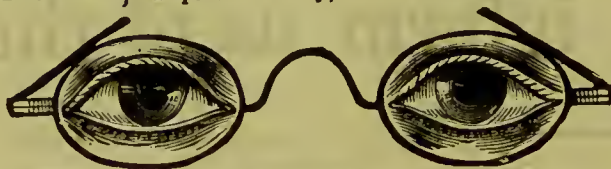
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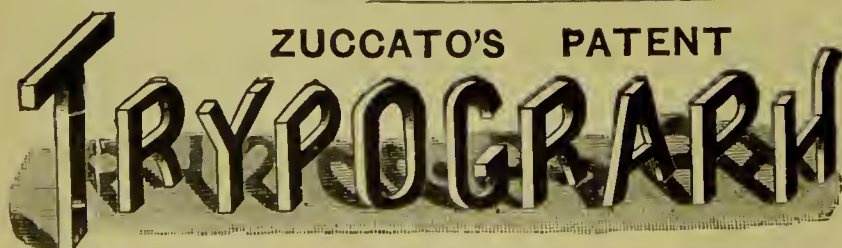
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Specialities in Clinical Thermometers with indestructible indexes—half minute and lens front, &amp;c.

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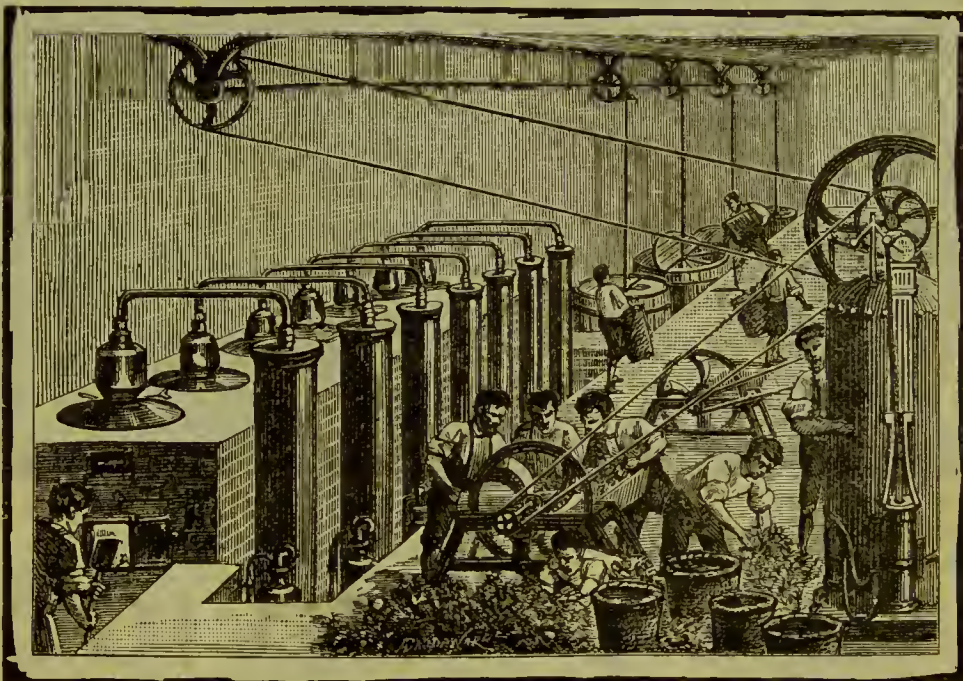
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# JOSEPH MACK'S AUSTRIAN (PINUS PUMILIO) PINE

AGAINST THROAT AND CHEST AFFECTIONS,  
BRONCHITIS, INFLUENZA, RHEUMATISM, GOUT, AND SCIATICA.

THE pine trees are carried from the high altitudes (5,000 to 6,000 feet above sea level) direct to the distilleries by a specially-constructed set of wires. Without such set of wires it is not possible to produce the pure *Pinus Pumilio*, because the transport of the pine trees on men's shoulders is too expensive. On the Continent there does not exist a distillery of any standing making pure Essence and Extract of *Pinus Pumilio* upon scientific principles, except the distillery of JOSEPH MACK. Thousands of testimonials have been received. The best testimonial is shown by the fact that at MACK'S Establishment at Reichenhall, near Salzburg, last summer over 7,000 persons (sent by physicians from all parts of the globe) were successfully treated. This is the best guarantee for MACK'S superior distillation over all other pine.



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**MACK'S ESSENCE.** Used in Inhalation in cases of Diphtheria, serious Affections of the Voice, and Impaired Respiration; in Friction against attacks of Gout. Large bottles 3s.

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**THE NEW AERATED TONIC**  
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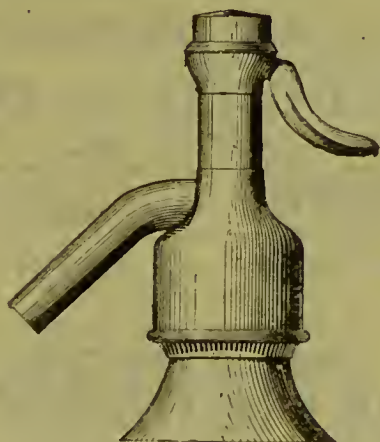
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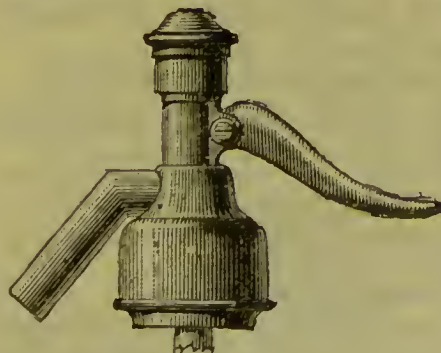
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To Make Seltzer and Vichy  
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*New Patent Syphons with TUBES entirely made of CRYSTAL for Lemonade and Potash or Soda Water.*

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½-Pints, 1/8 per doz.; Pints, 3/ per doz.; Quarts, 5/9 per doz.

EXCELSIOR TABLE JELLIES.



EXCELSIOR TABLE JELLIES.

FLAVOURS:

Orange, Lemon, Calves' Feet, Vanilla, Raspberry, Noyeau, Cherry, Strawberry, Pineapple, and Black Currant.

**CHAS. SOUTHWELL & CO.**

DOCKHEAD, LONDON, S.E.

**A WONDERFUL SUCCESS!!****NON-INTOXICATING BEER**

Made from MASON'S Original

**EXTRACT of HERBS**

(REGISTERED.)

Composed of Yarrow, Dandelion, Comfrey, & Horehound  
ENLARGEMENT OF SIZE.A Sixpenny Bottle makes EIGHT GALLONS of  
**HERB OR BOTANIC BEER**A NON-INTOXICATING BEVERAGE  
Full of Body and Flavour, with a Creamy Head like Bottled Ale, the most perfect substitute for Aleoholic Drinks ever discovered, for either Summer or Winter.**BEWARE** of mean and fraudulent imitations.**BEWARE** of others copying our title.**MASON'S** is the original and only genuine.**MASON'S** is a Special Compound entirely from Herbs.

NO OTHER EXTRACT MAKES BEER LIKE IT.

Sold in Bottles at 6d., 1/, &amp; 2/ each, with directions.

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Make Temperance Wines in a few minutes.

Ginger, Orange, Lemon, Raspberry, Black Currant, &amp;c.

These are having a very large sale now, and are extensively advertised.

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A Digestive EXTRACT OF TEA, made instantly in Cup or Teapot.

The injurious action of tea upon the digestion is due to the tannin it contains; and as this dissolves instantly in hot water, no method of infusion can keep it out. Santha is the only form of tea that has no action upon either food or membranes; and it is not bilious like cocoa and coffee. The *Lancet* of May 4th, 1889, says:—"The aroma and the caffeine are preserved, and the tannin is neutralised and rendered innocuous." The *London Medical Recorder* of Feb. 20th, 1889, says:—"Santha possesses the aromatic and stimulating qualities of the crude leaf, minus its astringency. The *Illustrated Medical News* of August 31, 1889, says:—"We can recommend it as the most digestible and palatable form of tea yet submitted to us."

Santha is the only Tea suitable for Weak Digestions. Of Chemists, &c., 1s., 2s. 6d., and 6s.; or by post from works, 2d. extra. Wholesale Agents—BARCLAY & SONS, Farringdon Street, E.C.

# WILKINSON'S COMPRESSED

They are introduced to the public to enable them to make their own HOP BITTERS, YEAST, HOME BREWING, and numerous other purposes. Full particulars given in each packet.

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P.S.—Chemists will naturally see the great advantage in making their own Bitters from the Pure Hop itself. Dealers in every description of Isinglass.



# TOWER TEA HIGHEST AWARD

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FOR TEA AT THE

# PARIS EXHIBITION.



PRIZE MEDAL, PARIS, 1889.

To avoid imposition see that the trade marks (a Tower, with the word "Strength" across it, and "Tower Tea") are on every package, without which none is genuine.

WHERE VACANCIES EXIST AGENTS ARE APPOINTED BY



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**THE GREAT TOWER STREET TEA CO., LIMITED**

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# HASSALL & CO.'S PHOSPHO-CITRIC ACID

Is the Best, Purest, and most Economical Agent for Acidulating all Saccharine Beverages.

Price only **10d.** per lb., in 9 and 18 gallon casks ; **1s.** per lb. in small quantities.

One Ounce Measure is equal to One Ounce of Citric. It produces a higher class Beverage, and shows an economy of between £6 and £7 per cwt.

We do not ask for an order, we merely solicit the favour of a trial.

3-oz. Sample for Postage (3 stamps), or 14 lbs. on approbation.

**PAMPHLET GRATIS.**

## UNSOLICITED TESTIMONIALS.

We are pleased to be able to testify that your Phospho-Citric Acid is satisfactory under the most severe trials. We have placed Manufactured goods in which your Acid was used in a refrigerator for months, and also for nine months in a stove in which the temperature stands at over 150° day and night, and the bottles when examined to-day were as bright as the day they were put in.

LEMON STREET, ABERDEEN.

I have pleasure in hearing testimony to the fact that first-class waters are produced, with greater body and finer fruity flavour, at half the cost of Citric; and further that your Acid is free from all traces of **LEAD**, generally found in the crystals.

I am persuaded that your Acid will ultimately command the Mineral Water Trade.

Yours faithfully, WM. THOMSON.

"And may I also be permitted to add my testimony to the excellence of your Phospho-Citric Acid; I consider it far and away preferable to Citric."

O. H. ORTON, STOKES GOLDING.

## FERMENTATION.

When Fermentation is present, Saccharine Beverages made with this Acid will keep sound and bright several days longer than those made with Crystal Acids.

**HASSALL & CO.**  
**YORK ROAD, KING'S CROSS, LONDON.**

TELEGRAMS:—"REMPUJARON LONDON."



146 MINORIES, LONDON, E.C. New York Sydney & Co.

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We have recently been entrusted with a most important Agency for the above-named goods. Our Principals are the best known firm in Paris, and the Syphons are undoubtedly the cheapest and strongest in the market. The tops are made of pure English Tin, guaranteed free from lead. The Seltzogenes are made on the well-known "Fevre" system, and each one is thoroughly tested before being sent out.



WE CAN GIVE TO LARGE AND SMALL BUYERS EXCEPTIONALLY LOW PRICES.  
PLEASE WRITE US AT ONCE FOR PRICES, STATING QUANTITY OF EACH KIND REQUIRED

# SODA-WATER MACHINERY.

**MELBOURNE EXHIBITION, 1889, UNPRECEDENTED SUCCESS.**

We have obtained at the above Exhibition

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A feat never accomplished before by any other house supplying requirements for the Aërated Water Trade.

These awards will carry with them **THREE GOLD MEDALS**, which were awarded as follows:—

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TRADE MARK Registered May 21st, 1867.

THE PIONEER TEMPERANCE BEVERAGES. Ch. Eng. Temp. Chron.  
**BECKETT'S**  
**FRUIT SYRUPS & CORDIALS**

**MILD DRINKS.**  
Cherry. Raspberry.  
Strawberry. Lime Fruit.  
Black Currant. Lemon.  
Orange. Jargonelle Pear.  
Pineapple.  
Raspberry Vinegar.  
Orange and Quinine.

**HOT DRINKS.**  
Winterine. Honey Liqueur  
Aromatic. Black Currant  
Gingerette. Ginger Lemon  
Peppermint. Clove.  
Elderberry. Syrup of Hops  
Lime Fruit Cordial.  
Raspberry Cordial.

"First-class beverages."—*The Grocer.*

"Have an established reputation."—*Nonconformist.*

"That Beckett's Fruit Syrups are equal to what their proprietor claims for them is proved by the fact that they are largely used in Coffee Houses throughout the country."—*Coffee Public House News.*

Analytical Reports from GRANVILLE H. SHARP, Esq. F.C.S.; G. BOSTOCK, Esq. F.C.S.

Price Lists. Testimonials. and other information sent post free on application to the Manufacturer—W. BECKETT, Heywood, Manchester.

"Delicious beverages."—*Scottish Good Templar.*

"Beckett's Fruit Syrups are not to be excelled."—*Anti-Adulteration*

"All Mr. Beckett's preparations are most tastefully bottled and labelled, and their bright appearance makes them ornamental to the shelves of the Confectioner and Temperance Hotel-keeper."—*Good Templar Watchword.*

[Review

**PEPTONATE OF IRON** **DENAEVER'S**  
**SOLE MAKERS** **LONDON**  
**LIQUID PEPTONES STERILIZED**  
Free from microbes!  
Keep good for ever in all climates.  
113 BISHOPSGATE STREET WITHIN, LONDON, E.C.  
**DENAEVER'S PEPTONATE OF IRON.** A bland, non-irritating and most easily assimilable ferruginous preparation.  
**DENAEVER'S PEPTONE OF MEAT.** A powerful restorative for all ailments of the stomach, stimulates general nutrition. Is retained when the stomach rejects all other food. Pleasant to taste.  
Of all Chemists and Wholesale Houses.

# The Only Gold Medal

For INFANTS' FOOD awarded at the  
**PARIS EXHIBITION, 1889,**  
HAS BEEN CONFERRED UPON

# NESTLÉ'S FOOD



## PASCALL'S GOLDEN MALTEX

MANUFACTURED UNDER PATENT NO. 1,506.

TITLE FULLY PROTECTED IN THE COLONIES.

Contains 25% of Allen & Hanburys' Extract of Malt.

## PASCALL'S BLA-CUR-EX.

Composed of Black Currant Extract and Price's Glycerine.

NOVEL CONFECTIONS. MOST SALEABLE. DELICIOUS FLAVOUR. BRILLIANT AND ATTRACTIVE APPEARANCE. SELL AT SIGHT.

See Dr. Tanner's Report, and *The Chemist and Druggist*, April 20th, 1889.

Small Bottles containing about 6 oz., and 1-lb. Bottles

OF ALL WHOLESALE HOUSES, OR OF

**JAS. PASCALL,** Manufacturing Confectioner,  
BLACKFRIARS ROAD, LONDON, S.E.



**TYRER'S**

**MENTHOL**



PEDESTAL.

1d. sizes



BOTTLE.

6s. gross



VASE.

# INFLUENZA

CURED BY

## MENTHOL.

Dr. LENNOX BROWNE says:—"It kills the microbe of infection."—*Vide* MEDICAL PRESS AND CIRCULAR, January 8, 1890.

2d. Size, as Fig. A and B, 12s. gross, stained and varnished, all put on  $\frac{1}{4}$ -gross cards with ELASTIC. Sample free.

PETER TYRER, 70 LONG LANE, BOROUGH, LONDON, S.E.



FIG. A.



FIG. B.



## ROBINSON'S LIEBIG'S BEEF WINE.

Composed of Liebig's Extract of Beef, Extract of Malt, and sound Port Wine.

### REPORT ON BEEF WINES.

From the results of my Analyses of various Beef Wines I have had occasion to examine, none have equalled as regards strength, purity of ingredients, and (of no less importance) the skilful and judicious manner in which the respective ingredients have been proportioned and combined, the Liebig's Beef Wine manufactured by Mr. B. ROBINSON, of Pendleton, Manchester.

It is in every sense a reliable preparation, embodying in a pleasing and palatable form all the acknowledged medicinal and nutritive properties pertaining to Liebig's Extract of Meat, Extract of Malt, and sound Port Wine.

WILLIAM ELBORNE, F.C.S., F.L.S.,

Lecturer on Materia Medica in the Owens College, Manchester (Victoria University).  
December 15, 1888.

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Specially prepared for Quinine Wine, does not deposit, will keep good in any climate, and well adapted for Export Trade. Supplied in Casks containing 9, 18, 30, 60, or 120 Gallons. Terms on application.

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**W. J. BUSH & CO., ARTILLERY LANE, LONDON.**



Telephone Number, 1852.

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Day, Son and Hewitt (Veterinary)  
Day and Sons (Veterinary)

**MENTHOL**

A. I. Menthol Depot, A. W.  
Shirley, P. (Pfeiler)  
Cooking and Co.  
Hockin, Wilson and Co.  
Tyrer, P.

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Fuerst Brothers  
Howards and Sons  
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Harvey, J. & W., and Co.  
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Macnair, J. and D., and Co.  
Phillips, G., and Co.

**METHYLENE**

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Perken, Son and Rayment

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Nestle, H. (Condensed)

**MIXING****MACHINERY**

Carter, J. H.  
Gardner, W.  
Werner and Pfleiderer

**MORPHIA**

Macfarlan, J. F., and Co.  
Smith, T. and H.

**OILS, PAINTS, &c.**

Anglo-American Oil Co. (Lim.)  
Guthurst and Harding  
Fox, W., and Sons  
Pronk, Davis and Co.

**ointment bases**

Burroughs, Wellcome and Co.  
Cheshbrough (Vaseline)  
Grindley (Petroleum Jelly)

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Pomies, Dr.  
"Opticura"

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Perken, Son and Rayment  
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Treatt, H. C.

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Horn and Son

**PEPPERMINT OIL**

Cooking and Co.

**PEPSINE, &c.**

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Cheshbrough and Co.  
Fletcher, Fletcher and Stevenson  
Newberry (Luglavin)  
Warner and Co. (Luglavin)

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Sequab (Limited)  
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Mann, C., and Co.  
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Rosmarina Manufs. Co.  
Rouse and Co.  
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Stedman, J.  
Taylor, J. N.  
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Vogt, G., and Co.  
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West, T. (Oke's Mona)  
Woolley, Sons & Co. (Powder)

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Howards and Son (Chemicals)  
Marion and Co.  
Orme, J., and Co.  
Perken, Son and Rayment  
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Stern, G. and G.

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Pindar, J. W.  
Toogood, W. (Oatier)

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Henrich and Son  
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Lorimer and Co.  
Martindale, W.  
May and Baker  
Morson, T., and Son  
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Ricques and Co.  
Roberts and Co.  
Soden Mineral Produce Co. Ltd.  
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Woolley, Sons and Co.  
Wyleys and Co.

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Meehan, Thomas  
Fide's Gout Pills  
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Frere, L.  
Holloway's  
Hooper's  
Hearon, Squire, and Francis  
McKesson and Co.  
Newberry and Sons  
Richard, J. M.  
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Johnson and Johnson  
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Howards and Sons  
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Morsen, T., and Son  
Zimmerman, A. and M.

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Kahn, B.

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Tyrer, P.

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Pharmacy (Lim.)  
Liverpool School of Pharmacy  
London Homoeopathic and  
Medical School  
Manchester College  
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Pharmacy, Lim.  
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Treble, G., and Son  
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Ewen, J., and Sons  
Fordham, W. B., & Sons (Ld.)  
Lucas and Co.  
Pears' Soap  
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Marks, H., and Sons (Ld.)  
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Wood, Vincent

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May and Baker

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Durfort  
Favarger and Co.  
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Geraut, E., and Co.  
Kilner Bros.  
Melin, C.

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Schoenfeld Freres

**SYRUPS**

Pletcher, Pletcher (Lignors)  
Idris and Co.

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Gt. Tower St. Tea Co.  
Santha Tea  
Walker and Dalrymple

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Peacock, M. & R.  
Taddy and Co.

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Simon, J.  
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Vaccins Association (Lymph)

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Evans and Sons (Limited)  
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THESE PERFUMES have been known to the trade for many years past, and their steadily increasing sale is the best proof of the appreciation in which they are held. Notwithstanding that the prices of some brands of perfumes have been reduced, F. NEWBERRY & SONS find it both impossible and needless to offer any other advantages to buyers than—(1) the excellent quality of the Perfumes themselves, (2) their price. The object kept in view is not to produce goods which may be sold at a given price and leave a given margin of profit, but to produce such as shall equal or surpass a given standard of quality.

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In PLAIN STOCK BOTTLES of 20 oz., 10 oz., and 5 oz.	£ s. d.
Ess. Bouquet .. .. .	
Frangipane .. .. .	
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Jockey Club .. .. .	per 20 oz., 0 8 7
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Eau de Cologne .. .. .	per 20 oz., 0 4 4
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Berdod's Perfumes, in Handsome Show Bottles for the Counter, Rose Cut Stoppers, Vitrified Opal Shield Labels with Gold Border and Black Letters, from 11s. 6d. each.

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## NOTE REDUCED PRICES OF QUININE PILLS.

LIST OF "McK. & R." CAPSULE<sup>D</sup> PILLS  
OF THE BRITISH PHARMACOPŒIA AND OTHER STANDARD AUTHORITIES.**McKESSON & ROBBINS,**  
WHOLESALE DRUGGISTS AND MANUFACTURING CHEMISTS,  
ESTAB. 1833.] **NEW YORK, U. S. A.** [ESTAB. 1833.*Supplied by the Principal Wholesale Houses in the Trade throughout Great Britain and Ireland.*

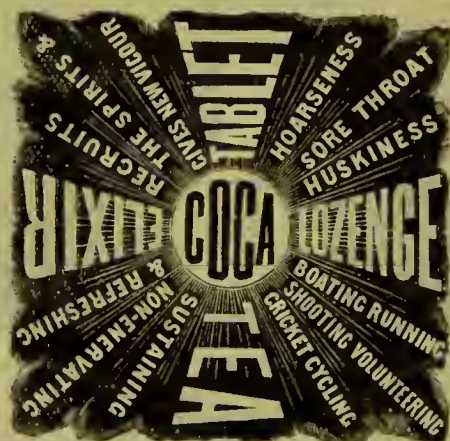
The reputation of Gelatine-Coated Pills has been created by our manufacture.	DOZ. BOTTLES containing containing		Being completely sealed, all substances are perfectly preserved from oxidation.	DOZ. BOTTLES containing containing	
	25 PILLS.	100 PILLS.		25 PILLS.	100 PILLS.
Aloin .....	5/	16/	Quinine, Bisulphate.....	5/	16/
" .....	8/	20/	" .....	5/	16/
" .....	7/	24/	" .....	5/6	18/
" .....	11/	40/	" .....	7/6	28/
" Compound .....	7/	24/	" .....	9/6	34/
" and Strychnine .....	7/	24/	" .....	11/6	42/
" Strychnine and Belladonna .....	7/	24/	" Sulphate .....	5/	16/
" or Aperient, No. 1 (Clark) .....	9/	32/	" .....	5/	16/
" No. 2, No. 3, No. 4 .....	7/	24/	" .....	6/	20/
Morphine Murate .....	7/	24/	" .....	8/	23/
" .....	9/	32/	" .....	10/	36/
Narcotic Extracts (Brown-Sequard) .....	15/	56/	" .....	12/	44/

A Complete List of Formulas and Prices will be mailed promptly on application.

*In ordering, be careful to specify "McK. & R." CAPSULE<sup>D</sup> PILLS.*

Originated 1870, by McKESSON & ROBBINS, New York, U.S.A. Merchants, Shippers, and the Wholesale Houses in the Trade are supplied by Messrs. S. MAW, SON & THOMPSON, 7 to 12 Aldersgate Street, London, E.C.; Messrs. BURROUGHS, WELLCOME & CO., Snow Hill Buildings, London, E.C.; and Messrs. HOCKIN, WILSON & CO., 38 Duke Street, Manchester Square, London, W.

**Coca**  
**Coca**  
**Coca**  
**Coca**



**Tablets**  
**Lozenges**  
**Elixir**  
**Tea**

A Pamphlet will be forwarded to any applicant containing the testimony of eminent British and Foreign Medical Authorities to the invaluable properties of the Coca Preparations.

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**MENTHOLIN SNUFF.**

This is a Perfect Remedy for Cough or Cold in the Head. It is a powder taken as snuff, and is prepared from the OIL OF MINT principally, together with ingredients from other healing herbs. To all the disorders resulting from a cold, this snuff is an effectual antidote.—See C. & D., Jan. 18, p. 69.

Retail, 1s. 1½d. per Box, by Post 1s. 3d.

**COCA TOBACCO.**

We take this opportunity of thanking the numerous Chemists all over the Kingdom who patronised us and sold our Coca Tobaccos. We now beg to inform them and the Trade generally that, the difficulty with the Customs having been satisfactorily settled, we are now prepared to execute all orders entrusted to us for these Tobaccos, with our other preparations of Coca (as above), which are now commanding a ready sale.

COCA TOBACCO, Mild, Medium, and Strong

USUAL WHOLESALE DISCOUNT.

CAN BE OBTAINED FROM ALL WHOLESALE HOUSES.

12/- per lb.

THE FRENCH HYGIENIC SOCIETY OF LONDON, 6 CONDUIT STREET, LONDON, W.  
REGENT STREET,



46, HOLBORN VIADUCT,  
LONDON, E.C.,  
December 23rd, 1889.

# LACTOPEPTINE.

## ADVANCE IN PRICE.

From and after January 1st, 1890, the prices of

### LACTOPEPTINE

will be as follows:—

1-oz. (4/6 size) ... ..	42/6 per doz.
Gross and upwards ... ..	38/- „
4-oz (14/- size)... ..	12/6 each.
Dozen and upwards ... ..	11/- „
8-oz. (27/- size)... ..	23/6 „
Dozen and upwards ... ..	21/- „

### UNSTAMPED, FOR DISPENSING ONLY.


(Cost of Stamp deducted)

4-oz. ... ..	10/6 each.
Dozen and upwards ... ..	9 - „
8-oz. ... ..	20/6 „
Dozen and upwards ... ..	18/- „

The small size (1-oz.) retailing at 4/6 is not sold unstamped for dispensing.

### UNSTAMPED, FOR EXPORT.

1-oz. ... ..	35/- per doz.
Gross and upwards ... ..	32/- „
4-oz. ... ..	10/6 each.
Dozen and upwards ... ..	9/- „
8-oz. ... ..	20/6 „
Dozen and upwards ... ..	18/- „

 Terms Net Cash, Monthly Account.

JOHN MORGAN RICHARDS.

46, HOLBORN VIADUCT,  
LONDON, E.C.,  
December 23rd, 1889.

# CARTER'S LITTLE LIVER PILLS

## NOTICE.

From and after January 1st, 1890, the price of

CARTER'S LITTLE LIVER PILLS  
will be 9/- per doz. net.

CARTER'S LITTLE NERVE PILLS  
will be 9/- per doz. net.

CARTER'S IRON PILLS  
will be 22/- per doz. net.

CARTER'S LIVER BITTERS  
will be 36/- per doz. net.

CARTER'S BACKACHE PLASTERS  
will be 9/- per doz. net.

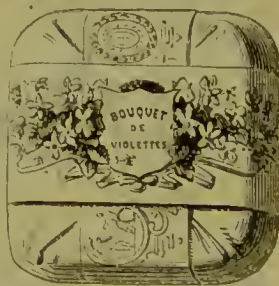
IN QUANTITIES OF 5 GROSS AND UPWARDS.

 Terms Net Cash, Monthly Account.

JOHN MORGAN RICHARDS.

SOLE AGENT.

# ECKELAERS' SOAPS.



The Celebrated Toilet Soaps and  
Perfumery of L. Eeckelaers,  
Brussels, gained the

## GOLD MEDAL (HIGHEST AWARD)

AT THE

PARIS EXHIBITION, 1889.

PRICE LIST ON APPLICATION.

JOHN MORGAN RICHARDS,

SOLE AGENT.

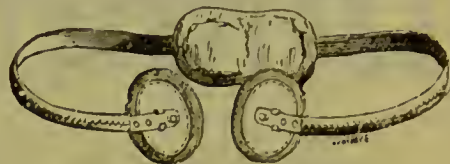
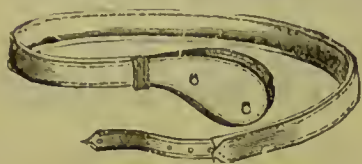




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MANUFACTURED THROUGHOUT ON THE PREMISES.

GREAT FACILITIES FOR MANUFACTURE AND QUICK DESPATCH OF SPECIAL TRUSSES.

**BAILEY'S TRUSSES FOR SCROTAL HERNIA.**

**BAILEY'S INDIARUBBER TRUSSES FOR INFANTS.**

MANUFACTURERS and DEALERS in all kinds of SURGICAL APPLIANCES, WHOLESALE and for EXPORT

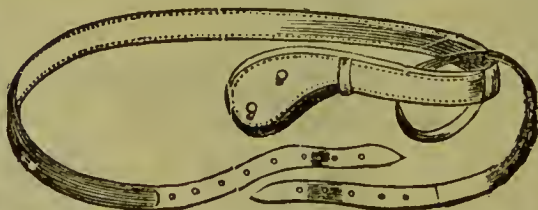
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ILLUSTRATED CATALOGUE AND TERMS ON APPLICATION

### SURGICAL APPLIANCES. TRUSSES.

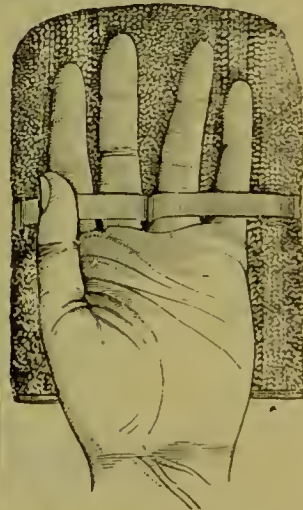
Common, Salmon & Ody's, Cole's, Moc. Main, Scrotal, and all other most approved principles made to order.



HAYWOOD'S SPIRAL ELASTIC  
SURGICAL APPLIANCES



PATENT 4,682. (Seamless.)



### MAGNETIC BELTS AND APPLIANCES.

Elastic Surgical Stockings, Knee Caps, &c.  
Patent Spiral Seamless Elastic Stockings, &c.

Patent Pile Surgical Elastic Stockings.  
Elastic Supports for Lawn Tennis, Cricket, Lacrosse, and other Athletic Sports.  
Bath and Rubbing Gloves.  
Bathing Caps and Belts.

Trusses of every description.

Poro-plastic Jackets.

Bandages — Indiarubber, Elastic, Lint, Cotton, Sayres', &c.

Chest Expanding Braces.

Horse Ear Caps & Veterinary Appliances.

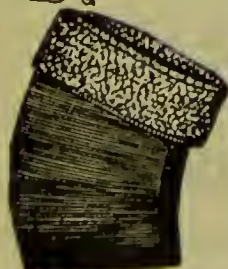
Suspensory Bandages.

Ladies' and Gentlemen's Belts.

Hot Water Bottles and Covers. Respirators. Inhalers. Bronchitis Kettles. Throat Sprays. Waterproof Coats, Cloaks and Driving Aprons. Footballs, Shin Guards, and Athletic Appliances. Druggists' Sundries, Invalid and Nursery Appliances, &c.

MANUFACTURER AND PATENTEE:

**J. H. HAYWOOD, CASTLE GATE, NOTTINGHAM.**



Patent Pile, Protected, 14,618. The Pile lying over the Indiarubber Cord, protecting them and forming a smooth soft surface to the limb.



# NEW STEEL ENAMELLED TABLET.

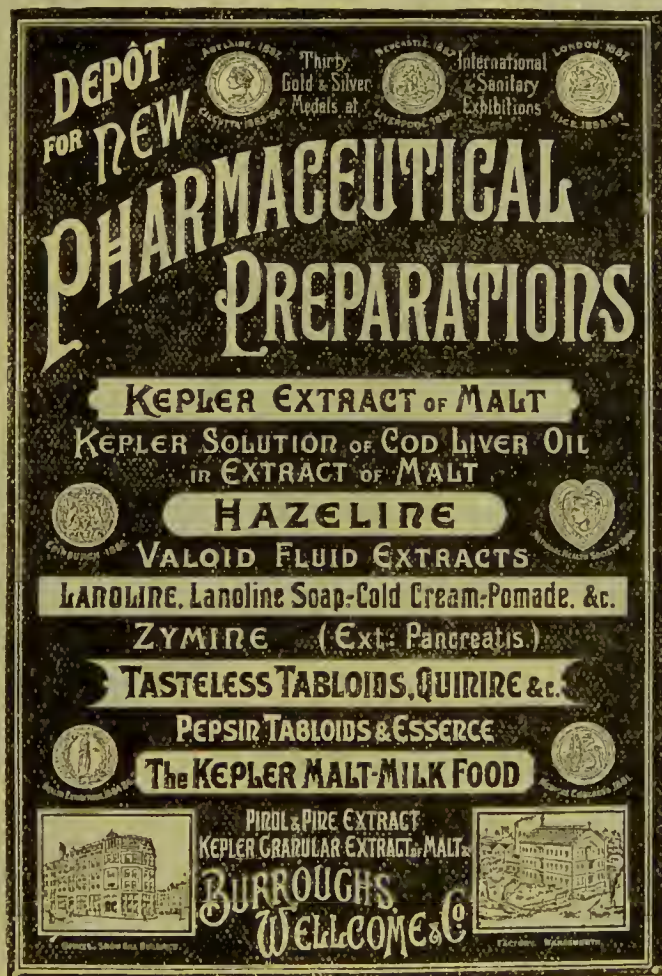
Size, 23 in. by 33 in. Flat or Curved.

AN ATTRACTIVE ADVERTISEMENT FOR THE DRUG TRADE.

SUITABLE FOR OUTSIDE OR INDOOR DISPLAY.

Free to non-cutting Chemists who will keep it in good position.

The subjoined sketch illustrates the new Enamelled Steel Tablet, which is highly appreciated by all Chemists who have seen it. Medical men are also glad to learn from it where our products and new Pharmaceutical preparations generally may be obtained.



The Tablets are enamelled in several colours, the Medals being in silver and gilt. We can supply them in blue or chocolate coloured background. They are weather-proof, and suitable for fastening on outside of business premises. Can be sent direct or in care of Wholesale House.

## A FEW OPINIONS OF CHEMISTS WHO HAVE THEM.

No. 1.—"Re Enamelled Tablet. We have placed it in a prominent situation facing the door, it undoubtedly has attracted attention and consequently has to some extent assisted in increasing the sales of your preparations. We may here tell you that it is the only one we allow to be displayed in our establishment."

No. 2.—"Concerning Tablet, I am happy to say it has certainly influenced the sale of your goods, and inquiries have increased concerning them since it has been exposed. As an effective showcard it has been much admired."

No. 3.—"I have to state your Enamelled Steel Plate, which I have affixed inside my shop, has caused many inquiries for your various preparations, and I find the sale has increased."

No. 4.—"The Enamelled Tablet has been an attraction

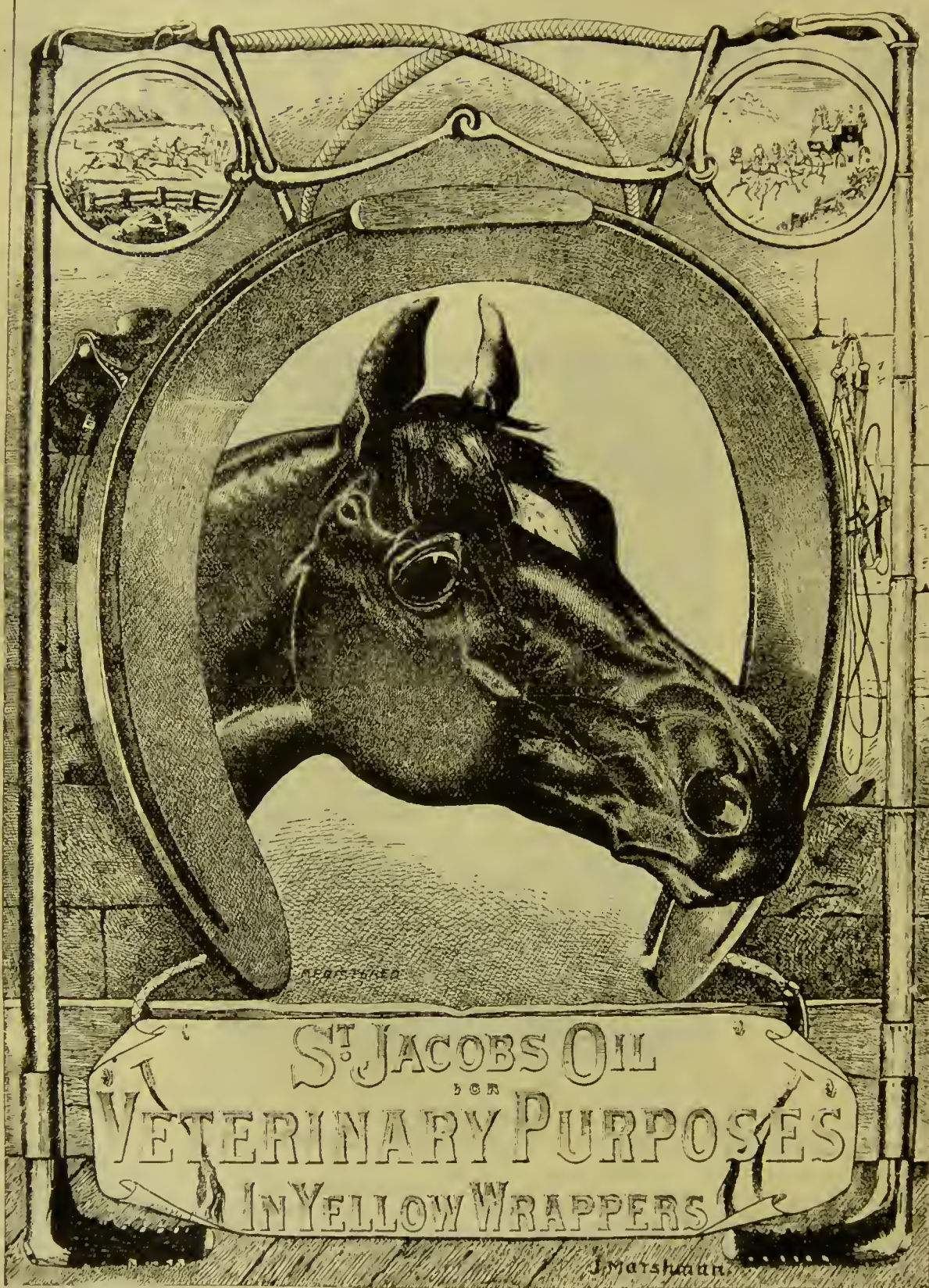
for my window, and I think has tended to increase the sale of your preparations."

No. 5.—"Respecting the Steel Enamelled Tablet which you so kindly sent me, I have found the same very useful and effective as an advertisement."

No. 6.—"We consider the Enamelled Show Tablet you inquire concerning to be excellently executed, most striking, and attractive to customers (whether displayed within window or upon wall), and certainly calculated to favourably influence the sales of your well-known and increasingly popular productions."

No. 7.—"Respecting the Enamelled Show Tablet, I beg to say I am much pleased with it, have had it hung in prominent position, and that it has received favourable comments from many customers."





We desire to impress upon the Trade the fact that St. Jacobs Oil in Yellow Wrappers for use on Horses and other animals, is not the same as the OIL in White Wrappers for Human Use. The OIL in Yellow Wrappers contains ingredients which experience has demonstrated are the best for use on animals.

Furthermore, the OIL in Yellow Wrappers costs 1s. per dozen less than the Oil in White Wrappers. We trust that every dealer will include a small quantity of St. Jacobs Oil in yellow Wrappers in his next Stock Order.

We are prepared to supply the Trade with special matter in the form of Counter Wrappers, Show Cards, Picture Cards, &c., advertising these goods. Every dealer should send to us direct for our Revised Price List for St. Jacobs Oil in White and Yellow Wrappers.

**THE CHARLES A. VOGELER CO., 45 FARRINGTON RD., LONDON, E.C. & AVENUE KLEBER 72, PARIS.**



# The Throat and Voice.

LONDON]

MARCH 29TH.

[1890.

## CHLORATE OF POTASH TABLOIDS.

FOR AFFECTIONS OF THE VOICE, THROAT AND RESPIRATORY SURFACES GENERALLY.

By using the Tabloids the drug is effectually brought in contact with the oral mucous surfaces as a continuous gargle, and its specific action made certain. In acute sore throat Chlorate of Potash "usually relieves the uneasiness in a few hours" (Cohen). "It is used in ulcerated mouth and follicular pharyngitis, and has been employed in croup, diphtheria, and spasm of the larynx" (Brunton).

"Of convenient size, they are beautifully made; and, as they dissolve slowly in the mouth, are well suited for throat affections."—*The Lancet*.

Supplied to the Trade in beautifully graven white metal boxes, blue silk label, at 4s. and 8s. 6d. per dozen. Retail prices, 6d. and 1s. each.

## CHLORATE OF POTASH & BORAX TABLOIDS.

The Tabloids afford an agreeable form in which to administer Chlorate of Potash and Borax.

Supplied to the Trade in beautifully graven white metal boxes, pink silk label, at 4s. and 8s. 6d. per dozen. Retail prices, 6d. and 1s. each.

## CHLORIDE OF AMMONIUM TABLOIDS.

The solvent and discutient as well as antiphlogistic powers of Chloride of Ammonium are well known, and have led to its extensive employment in cases of sore throat and bronchitis, attended with abundant secretion of thick and tough mucus or phlegm. The Tabloids slowly dissolving secure direct and continuous contact with the inflamed surface. They quickly mitigate irritation, and lessen expectoration.

Two or three of the Tabloids will sometimes entirely relieve coughs that have long resisted treatment with ordinary remedies.

Supplied to the Trade in bottles, at 4s. 6d. and 12s. 6d. per doz. Retail prices, 6d. and 1s. 6d. each.

## VOICE TABLOIDS.

Composed of COCAINE, Chlorate of Potash and Borax.

Impart a clear and silvery tone to the voice. Easily retained in the mouth while singing or speaking. Now used by the leading singers and public speakers throughout the world.

DIRECTIONS. — A single Tabloid may be slowly dissolved in the mouth to remove huskiness or hoarseness.

Supplied to the Trade in beautifully graven white metal boxes, blue silk label, at 8s. and 16s. per dozen. Retail prices, 1s. and 2s. per box.

## SAL PRUNELLA TABLOIDS.

(NITRATE OF POTASH.)

"A popular remedy, sometimes successful in mild cases of incipient inflammatory sore throat, is a small piece of nitre allowed to dissolve slowly in the mouth" (Waring).

DIRECTIONS.—One or more (5 gr.) Tabloids should be dissolved slowly in the mouth for the local effect.

Supplied to the Trade in bottles of 100, at 14s. per doz. Retail price, 1s. 6d. each.

## HAZELINE.

This drug is highly commended by the British Medical Association's Committee on Therapeutics. Hazeline, being prepared from the fresh green twigs, contains all the valuable volatile principles of the plant Witch Hazel, and is much more uniform and reliable in its action than are the tinctures, fluid extracts, &c., prepared from the dried bark.

DIRECTIONS.—In catarrh or cold in the head it may be sniffed up the nostrils with an equal part of tepid water.

Dose for irritated or inflamed throat and lungs, half to one teaspoonful occasionally.

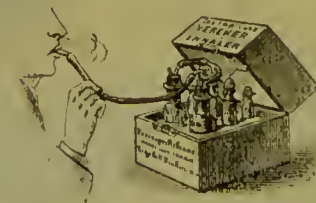
Supplied to the Trade in  $\frac{1}{4}$ -lb. and 1 lb. bottles, at 14s. and 42s. per doz. Retail prices, 1s. 6d. and 4s. 6d. each.



The Witch Hazel Plant.

## IMPROVED VEREKER CHLORIDE OF AMMONIUM INHALER.

"The neutral vapour of Chloride of Ammonium removes unhealthy and offensive secretions, and restores the long diseased or weakened nasal and respiratory mucous membrane to a healthy state, so that in cases of catarrh, where thickening, induration, and irritation exist, a most decided



improvement is brought about in a short time." In "throat-cough," pharyngeal irritation, and relaxation and weakness of the throat, it acts as a most effective alterative and tonic to the mucous membrane.

Dr. FRANKS, Dublin University, says:—"It is the best I have ever used, and I think I have tried all."

Dr. SMYLY, Ex-Pres. Royal College of Surgeons, Ireland, says:—"It is the best Inhaler for Chloride of Ammonium I have met with."

Supplied to the Trade at 60s. per doz. Retail, 7s. each.

**BURROUGHS, WELLCOME & CO.,** Snow Hill Buildings, LONDON, E.C.

Above Prices subject to usual Discount.



# STROPHANTHUS

(AFRICAN ARROW POISON).

THE value of this as a diuretic and cardiac tonic has been fully confirmed since its introduction to the profession by us. Most unfortunately, several useless substitutes have been recently introduced into the London Drug Market, notable amongst others, the *Holurhena antidysenterica*; still there appears to be an adequate supply of the true *Strophanthus hispidus* seeds. The preparations usually prescribed are the Tincture 1 in 20, and the Tabloids, each containing two minims of the Tincture.

M. Buequoy (of Paris) employed *Strophanthus* in cases of Angina Pectoris with astonishing effects. He is said to have given it to 40 patients, 20 of whom had mitral insufficiency, and "three times only did *Strophanthus* completely fail."

*Strophanthus* Tincture (B., W. & Co.) supplied to the Trade in  $\frac{1}{2}$ -oz. and 1-oz. bottles, at 4s. and 6s. per doz.; 1-lb. bottles, 6s. each. Tabloids (containing two minims of Tincture in each) are the safest and most convenient form for administration. Bottles of 100, at 16s. per doz. Above prices subject to usual Discount.

**BURROUGHS, WELLCOME & CO., Snow Hill Buildings, LONDON, E.C.**

## HEARON, SQUIRE & FRANCIS,

Analytical & Manufacturing Chemists,  
WHOLESALE AND EXPORT DRUGGISTS.

### SELECT PREPARATIONS—"HERON" BRAND.

APPLICATION FOR SAMPLES INVITED.

ESS. PRO MIST. FERRI CO.

PEPSIN GLYCER. ACID.

LIQ. SANTAL CO.

SOL. BISMUTH. AROMAT.

LIQUOR IPECAC. PRO VINO.



TRADE MARK.

INFANTS' FOOD, MALTED.

EXTRACT OF MALT IN VACUO.

CASCARA CORDIAL.

LIQUID BUTTER COLOURING.

SOL. PEPSIN c. EUONYMIN.

Chemicals Examined as to Purity and  
Strength  
before being passed into Stock.

Latest Remedies in Pharmacy and  
Therapeutics.  
Standardized Drugs and Preparations.

**38 SOUTHWARK STREET, S.E.**  
(LATE 5 COLEMAN STREET, LONDON.)





ESTABLISHED 1859.

PRINCIPAL OFFICE, 42 CANNON STREET, LONDON, E.C.

BRANCH OFFICES:

MELBOURNE, SYDNEY, AND NEW YORK.

Published every Saturday.

Subscription 10s. per year, payable in advance; dating from the commencement of any month.

Supplied only to persons connected with the Trade.

Post free to every country in the world. Single copies 4d. each.

Cheques or Postal Orders should be payable to EDWARD HALSE, and crossed MARTIN &amp; Co.

Supplied regularly to every member of the following Societies, who have adopted THE CHEMIST AND DRUGGIST as their official organ:—

The Pharmaceutical Association of New Zealand.

The Pharmaceutical Society of Queensland.

The Pharmaceutical Society of South Australia.

The Hobart Chemists' Association.

The Launceston Pharmaceutical Association.

South African Pharmaceutical Association.

For Australasian subscribers the subsidiary journal, THE CHEMIST AND DRUGGIST OF AUSTRALASIA, is included.

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## EASTER HOLIDAYS.

As we shall go to press a day earlier next week, the Publisher requests us to state that advertisements for the Exchange Column must be received by Wednesday next, and all other advertisements not later than Thursday morning. The office will be closed from Friday to Monday inclusive.

## POST-CARD COMPETITION FOR MARCH, 1890.

NAME on a post-card the six most popular prescribers in the United Kingdom.

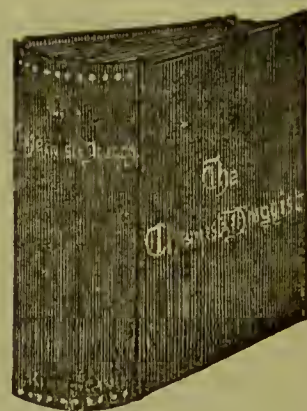
The usual prize of one guinea will be awarded to the competitor whose list comes nearest to the general consensus, but in the event of several forecasting the exact result we reserve the right to divide the prize.

Competitors must be subscribers or their employes. No cards will be accepted for competition which reach us after March 31.

THE subscription to THE CHEMIST AND DRUGGIST is 10s., which includes the numbers for a whole year, a copy of THE CHEMISTS' AND DRUGGISTS' DIARY next published, and postage to any part of the world. Orders and cheques should be made payable to Edward Halse.

THE CHEMIST AND DRUGGIST OF AUSTRALASIA, published monthly at our Melbourne office, can be supplied to subscribers outside Australasia at 5s. per annum, payable in advance, and commencing at any date. Chemists interested in the drug trade and the pharmaceutical affairs of the Australasian Colonies will find a full record of all events affecting their occupation in *The Chemist and Druggist of Australasia*. Single copies can be supplied at 6d. each. Application should be made by English or American subscribers to the office at 42 Cannon Street, London.

THE reading cases which we offer to subscribers are now used by a very large number of chemists, and are found very convenient. They keep together thirteen numbers in very tidy form, always ready for reference. By having two cases in hand the numbers of a complete volume are always available until the time comes for binding. We sell these cases at the office for 1s., or by parcels post 1s. 3d., or two for 2s. 3d. We cannot forward them to any house for enclosure, nor by any of the carriers, as in the latter case we have to pay for booking.



WE have pleasure in announcing to Continental subscribers that henceforth, by arrangement with the post offices of the various countries, subscriptions to THE CHEMIST AND DRUGGIST can be paid at any post office in Austria-Hungary, Belgium, Denmark, Germany, Holland, Norway, Russia, and Sweden at our rates, namely 10s. per annum including postal delivery to subscribers in any of those countries. Subscriptions may date from the first issue of any month.

## "THE HANDY BOOK OF MEDICINE-STAMP DUTY."

THIS work has been written for us by Mr. E. N. Alpe, of the Solicitors' Department, Inland Revenue Office, Somerset House, who has had a wide experience in and intimate knowledge of the administration of the Acts which regulate the sale of proprietary medicines. The Handy Book is, consequently, of exceptional value to chemists and druggists, more especially in showing how medicines are made liable to stamp-duty by labelling, circulars, and the like. Reviewers have been unanimous in stating that the work is not only complete, but interesting and invaluable. It is as free as possible from legal phraseology, is readable, and is nicely got up. Price 2s. 6d., or by post 2s. 9d. May be obtained through the wholesale houses in the same way as "The Art of Dispensing."

CONSULT the "Art of Dispensing" regarding all matters of difficulty at the dispensing counter. Published at this office, price 3s. 6d., by post 3s. 10d., and may also be obtained from wholesale houses.

SUBSCRIBERS' ADDRESSES.—In order to ensure uninterrupted delivery of THE CHEMIST AND DRUGGIST to subscribers who may be changing their address, notice of such change should be received by the Publisher not later than Monday of the week in which the journal is to be sent to the new address.



## Metropolitan Reports.

**CHEMICAL SOCIETY.**—At the meeting on Thursday, April 3, at 8 P.M., a "Note on the Hydrosulphides," by G. A. Picton, will be read.

**LECTURE ON SPONGE.**—In reference to our report of the "Lecture on Sponge" in our last issue, Mr. H. B. Marks points out that "polyparia" should read "porifera," and the word "firm" before "horny skeleton" should be deleted, as it is incorrect.

**CONTRACT FOR DRUGS.**—At a special meeting of the Strand guardians, which was held on the 20th March at the offices, 15 Henrietta Street, Covent Garden, W.C.—Mr. T. Hill in the chair—tenders were received for the supply of drugs to the infirmary, &c., for the ensuing twelve months. The contract accepted was that of Messrs. T. Hodgkinson, Preston & King, wholesale druggists, 81 Bishopgate Street Without, E.C., who undertook to supply the guardians at 17½ per cent. below their published list prices. Last year Messrs. A. S. Hill & Son, of 101 Southwark Street, S.E., had the contract at 15 per cent. below list prices.

**COMMITTAL OF A CHEMIST.**—On Tuesday at the Westminster County Court, the case of *Wege v. Stephenson* came before his Honour Judge Bayley, on a judgment summons. The plaintiff's solicitor said the judgment dated as far back as 1885, and only 11l. had been paid off, which was at the rate of 4s. 6d. per month. He would not pay unless he was forced to. He was a chemist in Basinghall Street, City. The defendant appeared, and said his position was the same now as it had been for some time past, and he was afraid there was little chance of it getting any better. He had been involved in a heavy chancery suit and sustained great losses. His Honour made an order of 5s. a month, but the plaintiff's solicitor thought he could pay more, and his Honour then made an order of committal, suspending it for one month.

**DISINFECTANTS FOR THE CLERKENWELL VESTRY.**—At the meeting of the vestry on Thursday, March 20, tenders were received for the supply of disinfectants for the ensuing year. Messrs. McDougall Brothers, of Mark Lane:—95 per cent. clear carbolic acid fluid free from tar oils and sulphuretted hydrogen, 1s. 7d. per gallon; 70 per cent. carbolic acid dissolved in caustic soda, and free from tar oils and sulphuretted hydrogen, 1s. 7d. per gallon; 10 per cent. carbolic disinfecting powder, free from tar oils and sulphuretted hydrogen, 5s. per cwt. The addendum to the contract was "and to pay the cost of analysis should it not prove to be in accordance with this tender." The tender of Messrs. Hamilton, High Street, Wandsworth (the present contractors), was (1), 1s. 3d.; (2), 10d.; (3), 3s. 10½d. The tender of Fletcher Bros. & Co., Hollis Street, Grimsby, Lincolnshire, was (1), 3s.; (2), 3s. 3d.; (3), 6s. 3d. The medical officer (Dr. Griffiths) in reply to a question, said he examined all the disinfectants sent in, to satisfy himself as to their purity. Mr. Ross, moved that Messrs. McDougall's tender be accepted. Mr. Kelly—I second that, because McDougall is not only a moral, but a physical purifier. (Laughter.) The motion was adopted unanimously.

**ALLEGED THEFT OF CHEMICALS.**—At the Southwark police court last week, George Wallis, a carman, in the employ of the London and North-Western Railway Company, was charged, before Mr. Slade, with stealing a large quantity of chemicals, valued at nearly 100l., the property of Messrs. Fallowfield & Co., wholesale chemists, of Oakley Street, Lambeth; and Edward Lamfort (a chemist) and Henry Normington (a photographer) were charged with receiving them, although knowing them to be stolen. It appeared from the evidence that Wallis, in the course of his duties, had to call at the prosecutor's place of business and collect parcels which were to be despatched to country customers. The parcels were handed out to him by a porter who was then in the prosecutors' employ, but who has since absconded, and is wanted by the police for complicity in the thefts, he having been seen to place three cases in the prisoner's van, two of which were afterwards traced to a beer-shop. When Wallis was arrested, he made a statement implicating the other persons in the robbery,

and when the police made a search at their houses, certain property was found, which was subsequently identified as that which had been stolen from the prosecutors. Mr. Hindley, the managing partner of the firm, said that during the past twelve months nearly 2,000l. worth of property had been stolen. Having taken formal evidence, the magistrate committed the prisoners for trial.

**A TRIAL TRIP.**—On Wednesday afternoon one of our staff, who called on Mr. S. M. Burroughs to hear what he had to say about his recent visit to Germany, found him on the point of going up the river. "Come with me to the race," said Mr. Burroughs, "and we'll talk about my trip on the way up. We have got a nice little steam launch to carry our goods from Dartford, and we shall give it a trial this afternoon." An invitation put in this pleasant way to view the boat-race was too tempting, and in a short time our young man found himself one of a company of about a dozen on board the tidy craft, which has been named the *Lanolina*. Since Messrs. Burroughs, Wellcome & Co. have removed their manufacturing department to Dartford, they have been compelled to cart all goods to and from London. This is done at a great expense, for five carts are on the road daily, and as carriage by rail is even more expensive the *Lanolina* is to have a fair trial. It will carry about 10 tons of goods itself, and yet have a large surplus of power for haulage, should the use of a barge also be required. On Wednesday *Lanolina* gave excellent proof of her good qualities, steaming under "lanolina" light blue flags from Blackfriars to Barnes Bridge in very quick time. In the chat with Mr. Burroughs our representative ascertained that his visit to Germany had little in it of general interest. He appeared to have been impressed with an interview he had had with Professor Liebreich, who has a mania for collecting ointment pots of all kinds, and has a unique assortment, including many curious specimens. The pharmacies of Germany are rather dull-looking compared with English ones, and are not so handsome, Mr. Burroughs thought; but there is no lack of enterprise on the part of both physicians and pharmacists, and he has succeeded in arranging for the general distribution of his firm's manufactures throughout the Empire. It is no part of our duty to report on the public event which took the party up the river, but one could not fail to note how smartly some firms connected with the trade turned it to good account. "Bouillon Fleet" was conspicuous upon a large river steamer, and within a quarter of an hour of the finish of the race another such was met hearing the legend, "Oxford trained on Bovril."

**SWIMMERS DINE.**—On Friday, March 21, the members of Messrs. S. Maw, Son & Thompson's Swimming Club, with a few friends, dined together in the Holborn Restaurant. The company numbered close upon 80, and shortly after seven sat down to dinner, under the presidency of Mr. J. Banks, the vice-chair being well filled by Mr. R. W. Carter. The programme which the committee had arranged was an excellent one, and all the pieces were well received by the company. Mr. G. Geddard's songs, and those sung by Mr. Oswald Sharply, were much above the average standard. Mr. Collingwood Banks, Organist at Christ's Hospital, and son of the chairman, acted as accompanist, and also played a charming improvised pianoforte solo. The amicable relations which exist between the firm and their employes was shown in a marked manner in the course of the evening when Mr. R. W. Carter submitted the principal toast. Giving his remarks a topical turn, Mr. Carter said, S. Maw, Son & Thompson were a firm who would never plunge into speculation and get beyond their depth; he trusted they would float safely down the stream of life and strike out boldly for the shore of fortune. These sentiments, and the toast to which they referred, were received with enthusiasm by the company, and the chairman made a feeling reply, in the course of which he mentioned that Mr. Trenham Maw, the president of the club, intended to have been present, but had been prevented at the last moment. There were other toasts on the programme which were done full justice to, and also several impromptu ones, "The Travellers," especially coming in for hearty acceptance. In putting this toast and coupling it with the name of Mr. T. C. W. Martin, the chairman said he remembered the day when Mr. Martin started on his first journey, about 35 years ago. He had a pony trap, with



a very small pony in it, so small that Mr. Solomon Maw was concerned about the length of the journey (and the pony, we presume), but was assured when Mr. Martin told him that Notting Hill Gate was his destination. The journey is a little farther than that nowadays, and it takes a bigger pony to carry Mr. Martin. In the course of his reply, Mr. Martin mentioned the fact that young Peter Squire asked him the other day how old he was, for he seemed to have always known him, and when he replied that he was nearing sixty now, Mr. Squire gave him the hint that if he would only make up some stuff and go about the country selling it as the *elixir vite*—the thing that had kept him so long on the road—he would make his fortune by it. "Well, it will be whisky and water," replied Mr. Martin. In the course of the evening, Mr. Banks distributed a number of handsome and valuable prizes to the most successful swimmers of the year; and Mr. J. Lloyd, the secretary, gave an encouraging account of the present condition of the club, which has 73 members on the roll, and 40 on the active list. Last season they had between 50 and 60 contests. In every respect the club is flourishing, and prizes are being showered on it in a prodigal manner, thanks to the liberality of the partners of the firm and the heads of departments.

## Provincial Reports.

*Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.*

### BIRMINGHAM.

**CARBOLIC POISONING.**—An inquest was held at Birmingham on Saturday, March 23, on the body of Martha Smith, a servant girl, aged 16, who died on the previous Thursday of poisoning by carbolic acid. The evidence went to show that the girl complained to her uncle of having a tyrannical mistress. In a letter, which was produced, the deceased said she had received notice, and that her mistress had threatened to withhold her wages. This statement was denied by the mistress. The jury returned a verdict of "Suicide whilst temporarily insane."

### LIVERPOOL.

**CHEMISTS' ASSOCIATION.**—At the meeting on Thursday evening a paper on "The Testing of Urine" was read by Mr. T. Williams, F.C.S., and a note on "Nitrate of Sodium Production" by Dr. C. Symes, the president. In connection with the latter several interesting specimens of the crude substance from Chili were exhibited.

**PHARMACEUTICAL STUDENTS' SOCIETY.**—At the meeting held on March 20 there were 18 members present, and Mr. Wyatt presided. Mr. Shaw read a paper on the "Estimation of Pot. Permang. Pills." In the course of his remarks he mentioned several excipients, and said that he found the best one was kaolin ointment. Samples were made with (a) kaolin and resin ointment, (b) kaolin and lanolin, and (c) kaolin ointment. One pill in each case contained 2 grains of permanganate and 1 grain of excipient. Two methods of estimation may be used—(1) with a standard solution of oxalic acid; (2) the B.P. method for the estimation of pot. permang.—viz., with granulated sulphate of iron and dilute sulphuric acid. The three-weeks-old pills gave with the B.P. test— $a = 75.0$  per cent.,  $b = 87.5$  per cent.,  $c = 98.25$  per cent. of the potassium permanganate originally present. Three weeks later they gave— $a = 72.59$  per cent.,  $b = 80.0$  per cent., and  $c = 93.75$  per cent.; and at the end of two months— $a = 58$  per cent.,  $b = 60$  per cent., and  $c = 88.75$  per cent., showing undoubtedly the superior non-oxidising effect of the paraffin excipient. Mr. Mitchell then read a paper on "Cannabis indica," in which he described at length the history of the plant, referring especially to the physiological action and the active principle. Mr. Johnson drew attention to an estimation of the volatile oil and resin of *Carum Ajowan* which he had made. He found 9.5 per cent. of volatile oil and resin, and about 10 per cent.

of ash. The yield of volatile oil is not generally given in text-books.

### MANCHESTER.

**CHEWING GUM.**—Mr. H. C. Yates, coroner for Cheshire, who recently forwarded to the Local Government Board the recommendation of a jury at Congleton that a substance called chewing gum should be included under the Food and Drugs Act, has received the following letter from the Assistant-Secretary of the Local Government Board: "Sir,—I am directed by the Local Government Board to inform you that your letter of the 14th ult., in reference to the case of a child whose death was caused by eating chewing gum, has been forwarded by them to the Secretary of State for the Home Department, and I am to state that the Board have had under their consideration the recommendation of the jury at the inquest; but they are of opinion that chewing gum is not a substance which could properly be brought within the scope of the Sale of Food and Drugs Act, as it does not appear to be sold for food, and, moreover, no question of its adulteration arises."

### NEWCASTLE.

**CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.**—The first annual conversazione was held in the Hall of the Café, Mosley Street, on Wednesday evening, March 19. The gathering was an unqualified success. The feature of the evening was a vocal quartette, arranged from the choral march "Honour to the mighty," composed by Mr. George Weddell, who accompanied the singers on the piano. Duets and pianoforte recitals were also given, and Mr. D. H. Oxen recited "The Owl Critic." At half-past nine the floor was cleared for dancing, the arrangements of which were in the hands of Mr. Peter Bell, who acted as M.C. Dancing was kept up until an early hour on the following morning.

### NOTTINGHAM.

**FATALITY OWING TO CONFUSION OF BOTTLES.**—On Saturday, March 22, an inquest was held at Beeston, touching the death of Ernest Browne, aged nine months, who died from laudanum poisoning the previous day. The child had been suffering from whooping cough, and the doctor called in gave a prescription, which was made up at a neighbouring chemist's. Elizabeth Browne, mother of the child, deposed that the bottle used for the medicine was that now produced. Witness had a bottle like it containing cough mixture. Two bottles were in the house on the previous Thursday night. The medicine was in one and the other was empty. Witness's husband fetched a halfpennyworth of laudanum in the empty bottle. The bottle was labelled, witness believed, "sweet nitre." The word poison was not on it. There was no fresh label on the bottle when it came back. Witness thought the child would get rest if it had a small dose, as it could not sleep, and was very ill. On Thursday afternoon the child was given some medicine out of the bottle produced, which was then put on the mantelpiece, where was also the laudanum bottle. Witness knew the laudanum was poison, and only intended to give the child three drops. In the evening about half-past eight it was time for the child to have its medicine, and witness poured out a teaspoonful of what she believed was the medicine. She was alone at the time with the child, and gave it a spoonful. She was going to administer another spoonful, when she discovered she had got the wrong bottle. Witness put the bottle on the table and called for her husband and a neighbour. Dr. Rothera was sent for, and he came and attended to the child, which appeared to rally; but at three o'clock in the morning it got worse, and the doctor was again sent for. Dr. Rothera stayed with the child until it died, about five o'clock in the morning. A verdict of "Accidental death" was returned.

### PLYMOUTH.

**ATTEMPT TO DEFRAUD A CHEMIST.**—At the Devonport police court on March 20, Ellen Keast, domestic servant to the Rev. J. H. Lang, of Stoke, was charged with uttering a



forged 5/- cheque with intent to defraud. William Langdon, residing at 17 Trafalgar Place, Stoke, and manager for Mr. Balkwill, chemist, said the prisoner came into his shop on March 14 and asked him to cash the cheque for Miss Jackson. Witness said he did not know Miss Jackson, but examined the cheque and saw that it purported to be drawn on Mr. Lang. Witness, knowing Mr. Lang as an old customer, told the prisoner if Mr. Lang or Miss Jackson would come themselves he would cash it for them. The Rev. J. H. Lang, retired naval chaplain, said he recognised the cheque as one he had partly filled in for Miss Jackson, but finding it was not required he was under the impression he had destroyed it. The signature attached to it was not his nor Miss Jackson's. Detective-Sergeant Blewett stated that on March 14 he went to prisoner's residence, and asked her for the cheque. She at first said she had cashed it, but afterwards produced it, and said that the Rev. J. H. Lang gave it to her because she was going to be married. Witness asked her what the name of Jackson was doing on it, and she replied that she had a cousin in Cornwall of that name. Prisoner on the way to the police station stated that she signed the cheque herself. She now pleaded guilty, and was committed for trial at the assizes.

### SHEFFIELD.

**MR. ALLEN ON THE WATER PROBLEM.**—Under the auspices of the Sheffield Pharmaceutical and Chemical Society, Mr. A. H. Allen gave on Friday, March 21, a public lecture, entitled "A Chemist's View of the Sheffield Water Supply, with special reference to its action on lead." The lecturer commenced by showing, with the aid of the lime-light, a map of the gathering ground for Sheffield water. From the nature of this gathering ground, the water was of the usual moorland type, being fairly pure, with solids low (5-7 grains per gal.) and hardness from 2°-3°. Mr. Allen referred to the discovery some years ago, that the water derived for the Redmires reservoir had a violent action upon lead. He discussed all the theories which had been advanced to account for this, and came to his own discovery of the fact that the water was acid to the extent of  $\frac{3}{4}$  grain of sulphuric acid per gallon. Whether this acid was crenic, apocrenic, or humic, was very doubtful, but there was no question of the fact that it was of organic origin. Incidentally, Mr. Allen referred to the disadvantage of litmus as an indicator, and the advantages to be gained by the use of methyl-orange and phenol-phthalein. He then spoke of the quantity of lead which existed in the water, and gave it as his opinion that very small quantities indeed—for instance, from  $\frac{1}{10}$  to  $\frac{1}{2}$  a grain per gallon—was sufficient to give origin to the symptoms of lead poisoning. The remedies for the removal of the lead were then dealt with, and after Dr. Tidy's suggestion to filter the water through limestone and flints had been adversely and somewhat jocularly criticised, reference was made to Dr. Edward Frankland's statement, that it was the presence of phosphates which prevented the Cumberland lake waters from acting on lead. To this also was due the fact of animal charcoal removing lead from water containing it. Filter blocks used to be made of wood charcoal, and were therefore really useless, but good animal charcoal contained at least 80 per cent. of calcium phosphate, and would continue to remove lead until a grey coating of lead phosphate was formed on its surface. An experiment followed, showing that pure calcium phosphate removed lead from water which was filtered through it, and a filter block, made of calcium phosphate, testified to the lecturer's mechanical ability. It had been shown by Mr. O'Shea, of Firth College, that single passage through filter paper removed lead from dilute solutions. Mr. Allen concluded an extremely interesting lecture, by showing a nodule of lead which he had prepared from water supplied to his own house. Samples of glass-lined pipes were on the table, and the different methods of testing for lead were demonstrated. A vote of thanks, proposed by the chairman (Mr. Elliman), and seconded by Mr. Leacroyd, terminated the proceedings.

### IRELAND.

**WINDOW DRESSERS.**—A local daily contains the advertisement of an apothecary for a shop decorator, whose services are required twice every week.

THE Board of Trade has fixed April 24 for a public sitting in Dublin to hear objections to the proposed classification under the Railway and Canal Traffic Act.

**THE QUALITY OF DRUGS.**—Reporting to the Tyrone grand jury the result of his analysis of drugs, Mr. Hodges, F.I.C., county chemist, states that five-eighths of the samples were inferior in quality.

**SERIOUS FIRE.**—The extensive premises of Mr. Patrick O'Connor, drug, oil, and colour merchant, Dolier Street, Dublin, have been completely destroyed by a fire, the cause of which is unknown. The damage exceeds 2,000*l.*, which is covered by insurance. Much difficulty was experienced in rescuing the occupants of the house.

**THE DEADLY NIGHTSHADE.**—Mr. Thomas Sexton, M.P., ex-Lord Mayor of Dublin, has charged the prisons authorities with the illegal use of helladonna, which, he alleges, "is administered to prisoners in order that, by breaking down their nerves, they might die a coward's death on the scaffold." The case in point has reference to John Daly, a convicted Irish dynamitard.

**FASHIONABLE "AT-HOME."**—Last week at Dublin Sir Charles Cameron, city chemist, held an extensive "at-home" at his residence, Pembroke Road. The guests, who exceeded 300, included the Prince and Princess of Saxe Weimar, and other nobles; the professional guests embracing representatives of the pharmaceutical and allied craft. In the course of the evening some interesting chemical demonstrations were given by eminent Dublin scientists.

**CONTRACT INTELLIGENCE.**—Tenders for a year's supply of drugs, medicines, hospital requisites, disinfectants, &c., have been accepted as follows:—Kinsale Union, Messrs. O'Sullivan, O'Neill and Orr. Mallow Union, Mr. H. Duggan. Cork Union, Messrs. Shinkwin, Dohbin & Co., Bailey, Scully, Henchy, Kelleher, and O'Connell (for general supplies); Messrs. Lynch, Fair & Ridge, Baker & Wright, Kiloh & Co., Waters, McDonnell (for paints, oils, and disinfectants); and Messrs. Harrington & Sons (drugs and medicines). Bandon poor law district: Messrs. Brennan, Lovell & Good (hospital requisites), and out of three tenders for medicines, Messrs. Harrington, Cork, was accepted.

**IRISH DRUG CONTRACTS.**—Tenders for a year's supply of drugs, medicines, surgical and medical appliances and miscellaneous sundries are invited as under:—The poor law board at Ballinasloe, and several adjacent dispensaries, April 2; the union authorities of Boyle, for the workhouse and five outlying districts, April 5; the guardians for Loughrea Union and a number of neighbouring stations, April 5; for Stranorlar workhouse and the dispensaries attached to the union, March 31; and on the same date a similar appointment will be made at Tubbercurry. The governors of the Monaghan District Asylum will on April 10 consider similar tenders, and dating from April 1 some valuable contract appointments will be made by the Cork Street Fever Hospital, the Dundrum Lunatic Asylum, and the Rotunda Hospital, Dublin.

### SCOTLAND.

#### DUNDEE.

**CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.**—An excellent paper on "Pharmacy," by Mr. William G. Lamont, brought a very successful session to a close on Thursday evening last. After a sketch of the evolution of pharmacy, and a brief reference to the experimental or technical branch of the subject, Mr. Lamont went on to consider it in its commercial aspects. In the course of a *resumé* of galenical pharmacy, much valuable practical information was imparted; and in a comprehensive review of dispensing, which he characterised as the consummation of galenical and scientific pharmacy, he strongly warned his hearers against malpractices and inelegance in any detail. In the course of the discussion which followed, the *strained* white bismuth mixture cropped up, as an instance of superfluity of elegance which was apt to creep into dispensing, and general regret was expressed that Mr. Lamont was about to sever his connection with the association, through his removal to Brechin. He and Mr. Skinner were elected to



the roll of honorary membership. On Thursday evening April 3, a conversazione will be held in Speed's Hall, Commercial Street, when a full attendance is desired.

MR. T. C. HENDERSON, who has held the appointment of resident dispenser in the Royal Infirmary here for about three and a half years, has resigned, having made arrangements for taking over the business of Mr. A. G. Reid, Stornoway.

#### EDINBURGH.

RAILWAY RATES.—At the meeting of the commission here on Tuesday, Mr. J. Rutherford Hill, assistant-secretary of the Pharmaceutical Society, gave evidence in regard to the effect which the proposed charges would have upon the drug trade.

#### GLASGOW.

CONTRARY TO EXPECTATION, but agreeable to his friends' best hopes, the accident to Mr. McMaster, the assistant in the Apothecaries' Hall, whose face was burned with nitric acid, as reported in our last issue, has fortunately proved comparatively mild in its effects, and he has now resumed work.

CHEMISTS AND DRUGGISTS' ASSISTANTS' ASSOCIATION.—In the course of the address given by Mr. McMillan last week he warmly congratulated the association on its success. Referring to the duty of exercising care and observation in little things, he contrasted the position of the chemist's assistant with the banker's clerk, showing that the smallest remissness on the part of a dispenser often entailed calamity and life-long regret. A few cases in point were instanced. Soon after starting business for himself he was one day spreading a fly-blister on the front shop counter, when a servant girl entered, and threw down a piece of paper, saying, "I want one or two the same as that," whereupon he spread a blister to the pattern of the paper. Next morning he had an unpleasant quarter of an hour with the customer and his medical man, when it transpired that what had been wanted was a belladonna plaster for a woman's breast. After much searching among the previous day's debris, the scrap of paper turned up, and there, sure enough, on the reverse side was written "Belladonna plaster this size." Moral: Look at both sides of the paper. In another case a gentleman went into a druggist's shop in Glasgow for a pick-me-up, and immediately upon swallowing it fell down unconscious. It was found that the liquor ammonia bottle had been put on the place on the shelf usually occupied by the aqua bottle, and the assistant had not noticed the change. The gentleman revived, but never afterwards enjoyed good health. Moral: See that shop bottles are kept in their customary places, and see that what you are handling is the right one. On a second occasion in his own shop two mixtures for the same patient were repeated, the one to be taken before and the other after meals, and by an oversight the labels were exchanged. Of course the customer called to inquire about the matter, and a simple explanation cleared everything up; but it had occurred to him that if the same thing had happened, say, with a concentrated poisonous mixture for an adult, and an innocuous one for a child, the result might have been more untoward. To obviate as far as possible all danger of mischance he had framed a set of rules for his own dispensing department, which he would venture to read to them. Critics might object to some points as trivial, but his aim had been to be on the side of precaution. (1) Scan the prescription minutely, noting abnormal doses, directions, &c. (2) Copy into prescription-book, scrupulously collating copy with original; then write out label in neat and legible hand. (3) Use no ingredient for the prescription which is not of the best quality and in the best condition. (4) Assistants engaged in dispensing must not talk with one another. (5) All dispensing to be rigorously checked. Mixtures to be judged by taste, colour, &c.; ointments by smell, colour, and general appearance; pills by size, &c.; and other preparations by similar means. Subjoined to this list, said Mr. McMillan, amid laughter, there was a penal clause, which he need not trouble them with. In a revised form of this table of rules he would almost add that the person last using the scales should always clean the weighing pan, and that spatulas should be cleaned immediately after being used—trifles perhaps, but yet frequent sources of annoyance. In supporting a motion for a vote of thanks to Mr. McMillan,

Mr. Currie mentioned a case illustrative of the vexations to which the druggist is occasionally exposed. A chemist in the West-end of Glasgow dispensed the prescription of a London physician, containing liq. arsenicalis and liq. potassæ, for a lady customer, who on taking the first dose was seized with what appeared to be symptoms of violent poisoning. A doctor was called in, and on reading the prescription deciphered the liq. potassæ as liq. atropiæ, and expressed the greatest surprise that any chemist should have sent out so excessive a dose. On being shown the chemist's prescription book, where liq. potassæ was entered, he was barely half convinced, and it was only by obtaining an independent analysis of the mixture that a threatened action was averted. It afterwards transpired that the lady had been suffering from intense nervous excitement at the time she took the dose of the new bottle, and the medical theory was that this fact made her more susceptible to the action of the arsenic.

### General and Provincial News.

MUMMY CATS.—The recent imports of mummified cats into Liverpool have all been disposed of, and there has been such a run upon stray samples lately that not even a single specimen in fair state of preservation is now procurable. It is reported that the Egyptian Government have prohibited the further exportation of mummy cats.

THE PORTUGUESE GOVERNMENT have appointed a commission of ten members to inquire into the reforms which it may be desirable to introduce in the organisation of the teaching of pharmacy and the law governing the exercise of the profession of a pharmacist in Portugal. The commission is entirely composed of active pharmacists and persons connected with pharmacy.

SOUTH KENSINGTON EXAMINATIONS.—The dates fixed for these examinations during the ensuing summer are:—Magnetism and electricity, May 15; sound, light, and heat, May 16; hygiene, May 20; inorganic chemistry, May 22; botany, June 4; and organic chemistry, June 5, at 7 P.M. to 10 P.M. on each occasion. Students who do not attend classes in connection with the department are admitted to the examinations on payment of a fee of 2s. 6d. for each subject. Applications should be made to the local committees without delay.

AN ANGLO-AMERICAN SODA-WATER SYNDICATE.—A syndicate of London capitalists are making negotiations for the purchase of the four firms in the United States controlling the manufacture of soda-water and beer apparatus, and the manufacture of syrups and extracts. The four firms with which negotiations are pending, says the *Oil, Paint, and Drug Reporter*, are Charles Lippincott & Co., of Philadelphia; John Matthews, of New York; and J. W. Tufts & Co. and the A. D. Puffer & Sons Manufacturing Company, of Boston. The amount of capital which the syndicate controls is said to be between \$3,000,000 and \$9,000,000, \$5,000,000 of which, it is estimated, will be used for the purchase of these concerns.

INTERNATIONAL MEDICAL CONGRESS.—In connection with this Congress, to be held in Berlin from August 4 to August 9, a "medico-scientific exhibition" will be arranged. The objects exhibited, which must be of a scientific nature, will be classified under the following heads:—(1) New or improved scientific instruments for biological and special medical purposes, including apparatus for photography and spectral analysis pertaining to medicine. (2) New pharmacological chemical substances and preparations. (3) New pharmaceutical substances and preparations. (4) New food preparations. (5) New or improved instruments for internal and external medicine, and allied specialities, including electrotherapy. (6) Plans and models (new) of hospitals, houses for convalescents, disinfection, and general bath-houses. (7) New appliances for nursing the sick, including the methods of transportation and baths for the sick. (8) New sanitary appliances. The exhibition committee consists of Herrn Paul Dörrfel, H. Haensch, Drs. J. F. Holtz, L. Loewenherz, J. Petri, H. Windler, and the



secretary-general, Dr. O. Lassar, to whom all communications should be addressed at Carlstrasse 19, Berlin, N.W.

**DEATH OF A CHEMIST FROM POISONING.**—On Monday, March 24, an inquest was held at Sunderland on the body of Thomas Thompson, 43 years of age, a chemist, carrying on business in Bridge Street, who was found dead at his premises early on that morning. Emma Maria Thompson, wife of the deceased, said she last saw her husband alive at the door of her house, about half-past seven on Sunday night. He was then going to see another chemist. He had been in a rather low state of health lately, and the doctor had attended him for a few months. He had to take a mixture at nights to obtain sleep. Dr. J. Wood, who examined the body, was of opinion that poisoning from prussic acid was the cause of death. After hearing other evidence, the jury returned a verdict that "the deceased died from taking prussic acid, but as to the state of mind he was in at the time there was no evidence to show."

**A POND FOR SKATING** during the coming summer months is being prepared in Paris, in the bull ring devoted last year to the Spanish toreadores. The ice surface will be prepared by the use of liquid ammonia, the surface of the arena-basin having been fitted with cast-iron worm-tube aggregating over two miles in length. Ammonia is pumped through these tubes by means of powerful steam-engines, and the vapour thus generated, which attains a temperature of 30 degrees frost, converts the water above into an ice surface over half a foot thick. The ammonia vapour is again compressed into liquid ammonia, and used afresh.

## FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

**PROFESSOR E. ZACCHARIAS**, who occupies the chair of Botany at the Strasburg University, last week visited the Paris College of Pharmacy and its library, escorted by Professor Guignard. The German professor (born in 1852) is a tall, heavy man, with numerous scars on his face, and speaks French without any accent.

**THE EIFFEL TOWER** is to be reopened from Sunday, March 30, for the season. The following will be the prices of admittance:—On week days, 1f. to the first platform; 1f. more to the second; and 2f. to the third; or 4f. for the whole trip. On Sundays these prices will be reduced to half. On the first platform, only one of the restaurants is to be kept as such, and another will be a lunch and beer-place (brasserie restaurant). The third hall is to be a casino and reading-room, and the fourth an assembly-room for banquets, balls, and such. To accommodate visitors to the high and dry dry regions of the second and third platforms, each floor is to be provided with a bar.

**RAPID ESTIMATION OF MILK FATS.**—M. Lizé, a professor at the Grignon agricultural school, proposed the following method in a note which was read last Monday before the Academy of Sciences. Place the milk in a flask with a graduated neck, add to it between two and two-and-a-half volumes of hydrochloric acid, and heat the whole until the casein has redissolved in the acid, and the liquor begins to turn brown. Now add ammonia and enough hot water to bring the supernatant fats within the graduated points. The number of c.c. divided by 0.90, the sp. gr. of butter, will give the proportion by weight, or one-tenth more of milk may be added before estimation. In practice the results have been found sufficiently accurate, and the process satisfactory.

**A MIDWIFE SENT TO PRISON FOR NOT USING ANTISEPTICS.**—Since February rumours were current in Lorient that a number of deaths caused by puerperal septicaemia, were due to the carelessness of Mme. Cornon, a midwife of the place, and a judicial inquest proved the reports to be true. No less than seven deaths from the infectious disease, between January 1 and February 19, were clearly traced to the midwife's neglect of the plainest precautions. In consequence she was sentenced on March 21, to six months' imprisonment,

and 50f. fine. This is said to be the first conviction of a midwife for propagating contagious diseases. It certainly seems rather hard that while the law places the best antiseptics, the poisonous ones, almost out of the reach of midwives, it should punish them for neglecting antiseptics. But, in the present instance, glaring carelessness, it seems, was undeniable.

**THE ANTISEPTIC FOR MIDWIVES.**—As will probably be remembered, at the time when the Academy of Medicine was considering the subject, the question of colour was left in abeyance. There was no disagreement as to the necessity of some artificial colouring, but the claret or Bordeaux red adopted by the committee was properly objected to, and the question referred back to the same committee, reinforced for the purpose with a pharmacist, M. Marty. Indigo blue, in definite quantity, has now been selected. So that, henceforth, after the academy's recommendations receive the expected ministerial sanction, pharmacists will be allowed to deliver to licensed midwives, on their written order, powders composed as follows:—

	Gramme.
Corrosive sublimate .. .. .	0.25
Tartaric acid .. .. .	1.00
Five per cent. alcoholic solution of indigo-carmine .. .. .	1 drop.

Mix, and dry. Label each paper with the regulation orange-red label, bearing the inscription (in French, of course):—"Corrosive sublimate, 25 centigrammes. For one litre of water. POISON." The solution is to be used for antiseptic washes and dressings, and its distinct blue colour is meant to prevent it being mistaken for other liquids commonly found in domestic economy. As the law stands at present, pharmacists have no right to give to midwives any poisonous antiseptics.

**THE KOLA-NUT IN WESTERN SOUDAN.**—Captain Binger, a French explorer just returned from the Kong and Samori regions, situated north-east of Liberia, has given before the Geographical Society an interesting account of his trip, important in many ways, scientific and political. Speaking of the kola nut, he said:—"The natives are very fond of the fruit. Some of them say it promotes sleep, others that it prevents it; some that it quenches, and others that it produces, thirst. But however it may be, the fruit is certainly a luxury to be offered as a mark of great friendship, and the acme of politeness for a native is, on shaking hands, to cut a kola-nut in two, to offer one half to the guest, and to eat the other half himself. The tree will not grow in latitudes higher than 7° 30'. Yet the principal market is in Ouoro-dougou, where the tree does not grow, and no foreigner is allowed to intrude. When a dealer comes in with salt to trade for kola, he is stopped at the frontier, told how many nuts he will be given against his salt, and if the terms are agreed to the fruits are sent for, the bargain executed, and the dealer dismissed, as certain families have a trade monopoly, guarded with jealous care. Further to the east, in the regions south of Kong, the kola trade is comparatively free, as the nut is cultivated there, the natives being, by exception, willing to take the trouble to plant a tree. It should be said that since no crop can be expected for ten or fifteen years after planting, and the blacks are in general too lazy and too improvident to foresee so far ahead, the country alluded to was the only one where I saw kola cultivated, and the trees are there planted in quincunxes, and taken care of. The nuts are packed in a leaf resembling lotus, and the packing material is itself the object of important transactions. Some traders will travel to places distant fifteen days' journey to obtain the right sort of leaf, as kola will not keep unless packed in the proper variety of material." To end with an instance of native manners, Captain Binger said that on leaving that part of the country, the chief insisted on his marrying three likely girls of his tribe. Not wishing to suddenly pass from single to three-fold blessedness, and unwilling to hurt his kind host, the captain gave the girls as wives to his three best men, who showed much satisfaction with their helpmates. As to the women, they felt so happy with their lot that they promised they would name their first-born after him. "Thus," he added, "if black Bingers are hereafter found thereabouts, I hope no one will wonder."



# Pharmaceutical Society of Great Britain.

## NORTH BRITISH BRANCH.

AT last week's evening meeting, held in Edinburgh on Thursday, March 20, Mr. William Gilmour, F.R.S.E., chairman of the branch, presided. There was an unusually good attendance at the meeting. The title of Mr. Storrar's paper, "The Future of Pharmacy," attracted several pharmacists whose faces are seldom seen at the evening meetings when science papers are the fare provided. After the preliminary business had been disposed of, the chairman said he desired to avail himself of the opportunity to offer his most grateful thanks for the many kind inquiries which had been made for him during his recent illness. He appreciated these marks of respect in a way which he was quite unable to express.

## THE PAPERS BY MR. D. B. DOTT

were then read. The first of these was on the *Estimation of Urea*. In this paper the author recommended the use of the nitrometer, Allen's modification of that instrument being preferred. The nitrometer is filled with hypochlorite of calcium solution (prepared by triturating 1 part of chloride of lime with three of water, and filtering). A measured quantity, conveniently 4 c.c., of the urine is then introduced in the usual way and mixed with the hypochlorite. A little baryta water is introduced to assist in absorbing the carbonic acid, and lastly a few drops of spirit to cause the froth to subside. In a short time the reaction is complete, and it is only necessary to read off the measured volume of nitrogen and make the usual calculation, to find the percentage of urea in the urine. Some results submitted by the author showed that his method is as trustworthy as the hypobromite one, and the former has the advantage of requiring a solution which can be very easily prepared, and is not troublesome. Mr. Dott's second paper was on *Litmus*. In this, after briefly referring to the process of preparing litmus, the author remarked on the frequency with which one comes across defectively-prepared solutions and test-papers made from that colouring matter. Tincture of litmus was condemned, a purely aqueous solution being in every way preferable. The following was given as the best method of preparing the solution and test-paper:—1 part of litmus is powdered and macerated in 5 parts of water for two days; it is then filtered, and 3 parts of water used to wash. The solution is to be heated to boiling, and dilute nitric acid added until all the carbonate is decomposed; and the liquor attains a permanent purple-red tint. Strips of thin filtering-paper are dipped in this solution and dried. Test-papers so prepared possess a purple or violet colour, are nearly neutral, and therefore delicate indicators. Following this was another paper on *Uralium*, or *Ural*. For this compound (chloral-urethan), the name "ural" is preferable to "uralium," as the latter name was originally applied to a metal of the platinum group. Mr. Dott emphasised the fact that this body is not a loose molecular compound of chloral and urethan, but is an essentially new compound, differing in its properties from either of its constituents. Although a valuable hypnotic, its use has been limited from the fact of its having been regarded as insoluble. The author pointed out that the ordinary dose (10 grs.) dissolves easily in 1 fluid drachm of proof spirit, so that there should be no difficulty in administering the drug in solution; but it was pointed out that when diluted with water crystallisation of the dissolved substance soon takes place.

In the discussion on the first paper, Dr. STOCKMAN referred to the various methods of estimating urea. They were all more or less inexact. In the hypobromite or hypochlorite method the error for which allowance was usually made was about 8 per cent. In certain conditions of the urine the error might amount to 17 per cent. or 18 per cent. The process was easily worked, and if used from day to day it showed the increase or diminution in the amount of urea in regard to any particular patient. That was really the requirement in the process. The error being, so to speak, constant, was not of objectionable consequence. Professor

Charteris's methods was the simplest of any for medical practitioners, because the percentage of urea was given on the tube. Personally, he thought Liebig's process most accurate, but unless the manipulator were expert at it, the error might be even greater than the others.

The chairman and Messrs. Hill and Gibson having offered some remarks in regard to litmus,

Dr. STOCKMAN referred in general terms to such hypnotics as uralium and sulphonal. He had great objection to use insoluble substances of this sort. The insolubility of uralium was, in his opinion, a great objection to its use. Sulphonal in some cases did not produce sleep for ten hours after it had been administered. During that time it must have been lying in the digestive tract undissolved. Dr. Stockman created some amusement by stating that in certain lunatic asylums sulphonal was given in large doses—from 80 grs. to 100 grs.—in order to bring on sleep in a short time. When the patient had obtained a good sleep, and threatened to sleep too long, a smart purge was given to clear away the undissolved sulphonal; after the purgative came off the patient woke up. This method, the doctor said, might be objectionable from the patient's point of view. He thought they should persevere until they obtained a substance which would act like sulphonal, and, at the same time, be soluble. He deprecated the useless multiplication of drugs of the same action.

## TINCTURA QUININÆ AMMONIATA.

This was the title of the next paper which was communicated by Mr. George Lunan. In previous notes it was pointed out by the author that this tincture mixes clear with aerated water. It has been stated that this is due to the formation of quinine carbonate. Acting on this idea, the author endeavoured to prepare a tincture in which the alkaloid exists as carbonate. After referring to the properties of the salt, and its probable use for ophthalmic and hypodermic purposes, since its solutions are feebly alkaline, and can be obtained up to 1 in 60 of water, Mr. Lunan stated that during the influenza epidemic, when it was so largely prescribed, the nauseous taste of the ammoniated tincture was much spoken of, and although the carbonated tincture cannot be called palatable, it is a distinct improvement in this respect. It forms a clear solution with 13 parts of distilled water and 15 parts of Edinburgh water, whereas the ammoniated tincture requires 26 and 30 parts respectively. In freshly-drawn aerated waters this new tincture is miscible in all proportions, whereas the old tincture is not. The following is the formula:—

Carbonate of ammonia (32.5 per cent. $\text{NH}_3$ )	323 grains.
Quinine sulphate .. .. .	160 "
Distilled water .. .. .	10 fl. oz.
Rectified spirit .. .. .	10 fl. oz.

Dissolve the carbonate in the water, add the spirit and the quinine, shake until dissolved, and filter; make up the product to 1 pint with distilled water.

This can be as expeditiously made as by the present method, and gives a preparation containing in each fluid drachm rather over 2 grains of carbonate of ammonia (equal to 1.25 per cent.  $\text{NH}_3$ ) and about .918 grain of quinine carbonate ( $\text{C}_{20}\text{H}_{21}\text{N}_3\text{O}_4\text{H}_2\text{CO}_3 \cdot \text{H}_2\text{O}$ ) (1 grain of sulphate). The formula has been in use for a considerable time, keeps well, and acts as quickly and efficiently as the present preparation. After a few remarks from Mr. Isaac W. Thomson, Mr. DAVID STORRAR, vice-chairman, read a paper on

## THE FUTURE OF PHARMACY AS A TRADE AND AS A PROFESSION.

In this communication the author aimed to establish the proposition that many of the evils that chemists are suffering from are due, in a great measure, to the fact that pharmaceutical legislation has hitherto tended to spoil a trade without creating a profession. If pharmacy is a trade, he maintained it should be free; if it be a profession—that is, if special education and special training are required by the State as conditions of its practice—then, like all other professions, it should be granted reasonable protection. In arguing this proposition, Mr. Storrar laid down at the outset two points—namely, (1) that before the formation of the Pharmaceutical Society, pharmacy was simply a trade; and (2) that, in spite of all that has been done, and admitting



the great advance which has been made in the status and practice of pharmacy, legislation is still required alike in the interests of the public and the pharmacist. In order to intelligently consider the future of pharmacy, Mr. Storrar said it was desirable to know something of its history, and this was sketched with a running commentary. For his purpose that history only commenced when, in 1841, a few metropolitan chemists and druggists formed themselves into the Pharmaceutical Society. Before that, pharmacy was simply a trade, with little or no cohesion, and upon the entrance to which the State placed no restriction. The object of the Society, as expressed in its constitution, was "for the protection of those who carry on the business of chemists and druggists," and "to provide a fund for the relief of the distressed members and associates of the Society," as well as for the purpose of advancing chemistry and pharmacy, and promoting a uniform system of education of those who should practise the same. As the ground upon which all attempts to interfere with the rights of chemists had been the amount of their professional qualifications, it was only politic as well as right that measures should be taken to raise the standard of the trade by an improved system of education; but none the less the motive power of the Society was trade protection. Started upon these lines, the Pharmaceutical Society has done excellent work in elevating the trade and providing for the efficiency of its members; "but one thing it lacked," and still lacks, to render it a thoroughly efficient conservator of trade interests, and that is, the support of the trade generally. For this and its consequences, it was pointed out, the Society was not itself to blame. It had more than once opened its doors widely enough to admit all who were entitled to enter. The trade not having responded, however, it had resulted that the Society, comprising, as it had done, the more scientific and ambitious members of the craft, these members had moulded its policy, and had kept the professional more than the trade element of its work in view, believing the higher training of the pharmacist to be the true road to travel in the direction of public confidence. This contest between the trade and the professional interests of pharmacists was traced through the charter and the Acts of 1852 and 1868 in order to show the difficulties attending legislation.

#### THE DIFFICULTIES WERE:

(1) That the professional and trade elements are as antagonistic as ever, the growth of professionalism, with all its advantages, having the disadvantage that it has destroyed to some extent our capacity for successful trading.

(2) Not to mention the sharp tradesmen within our own body, the outside trader, always on the look-out for fresh fields of enterprise, has discovered the joints in our harness, and, although he cannot open a dispensing establishment himself without infringing the law, can do so by assuming six other spirits worse than himself, and becoming a limited company, which, not being a "person" in the eyes of the law, cannot therefore break the law. The fact being that, in more senses than one, it is impossible for a company to become "qualified."

(3) That the Act of 1868, from which so much was expected, has failed us in another particular. It has taken over twenty years for the Society and the law courts to tell us what it really means. For all that time it was supposed that a qualified employer was responsible for and covered the actions of an unqualified assistant, and that what the Act says as to one section applied to the whole—namely, that "the person on whose behalf any sale is made shall be deemed to be the seller."

(4) That so called patent medicines containing poisons are outside the scope of the Pharmacy Acts, and can be sold by anyone who holds a patent-medicine licence, whether he be a registered chemist or not; and

(5) That according to the latest interpretation of the law, while chemists must be qualified themselves and employ qualified assistants, drug companies may trade without having a single qualified shareholder on the register, and the following clause of the 1868 Act stands unrepealed: "Nor shall any of the provisions of this section apply to any medicine supplied by a legally qualified apothecary to his patient," so that the said apothecary can hand over his dispensing to his housekeeper or stable-boy without fear of the law. The practical result of all this being that registered

men get all the kicks, while unregistered men pocket the half-pence.

#### THE DEFUNCT BILL.

With regard to the recent draft Bill, Mr. Storrar said it was a mistake in tactics to promote a Bill in Parliament regarding which those principally interested had not been consulted and had been given no time to consider, and regarding the provisions of which even the promoters were not entirely unanimous. The Bill was well intended and contained many good points, but the speaker thought it would not give satisfaction without considerable alteration. The council had generously, he thought, tried to carry the trade with it by offering to widen the entrance to the society to the utmost extent, and he regarded it as desirable, either by passing a law or otherwise, to provide at once for the admission of associates in business as members of the Society. If outsiders could, and would, thus join hands with them, the future of pharmacy would be secured. But if the outsiders persist in remaining outside, then they cannot complain if the members of the Society judge for themselves as to what they consider necessary for the safety of the public and the well-being of the profession. He would not enter upon educational points at the fag-end of a paper, except to say that although a curriculum is desirable, and even necessary, for our advance as a profession, it is not a necessity to press it at the present time—in fact, it suggests the idea that when the trade is calling for bread, you offer it a stone. There were, however, two practical points involved in the 6th clause of the draft Bill, viz., (1) the position of the unqualified assistant, and (2) the restriction of the sale of all drugs, and the sole right to dispense prescriptions to registered chemists. The legal meaning of the phrase "person who compounds" would, no doubt, be governed by the interpretation of the phrase "person who shall sell" in the Act of 1868. This being the case, and knowing that the legal interpretation, although still undeclared, is practically given, and knowing also the opinion of the council, it renders the position of the unqualified assistant an unenviable one, and bears very harshly upon the smaller chemists. He believed this interpretation to be against the public interest, unjust to both employer and assistant, and never intended by the framers of the 1868 Act.

#### PERSONAL RESPONSIBILITY.

To minimise the personal responsibility of the principal is distinctly against public safety; while the prevention of dispensing by unqualified men is an injustice to a large class of employers who cannot afford to keep senior assistants, or in some cases assistants of any kind. It is also unjust to junior assistants, who cannot, if the law is strictly enforced, gain that experience in dispensing to which they are entitled, and which is required by them to enable them to pass their examination. Mr. Storrar believed that the council intend that junior and unqualified men may dispense under the supervision of a qualified man; but if they intend this, let them say so, and so frame the Bill that it cannot be otherwise construed by lawyers. In proposing the restriction of dispensing to registered men the council have the entire support of the trade. The only objections which have been urged are that they have not gone far enough, some members being of opinion that we should boldly claim the sole right of selling all drugs as well as the sole right of dispensing them, and should also challenge the right of limited companies to be outside of the provisions of the Pharmacy Acts. The author could not see his way to claiming the sole right of selling non-poisonous drugs. That would be trespassing upon the convenience of the public to an extent which could hardly be justified; and, besides, the definition of the term drug would give rise to endless disputes and litigation. But he regarded differently the question as to limited companies. The decision of the law courts in favour of the companies was a purely legal interpretation of the wording of the Act, and did not touch the principle involved. It may be fairly argued that if the safety of the public demands certain qualifications on the part of the individual members of a firm, it should logically require the same qualifications on the part of the company. If a qualified assistant—liable to be changed every pay-day—acting as manager under unqualified employers, secures public safety, then why argue that an individual employer or



a firm employing qualified assistance should also require personal qualifications? The framers of the new Bill admit the injustice, but argue that the Companies Act has put too much money in the pockets of legislators and others to allow of its action being interfered with, and that any action on our part in this direction would be useless and wreck their Bill. This argument is a poor one. There is perhaps more cogency in urging that the work of Parliament is so congested that no opposed Bill has much chance of passing; but that the rectification of an acknowledged injustice has no chance of being carried out in the House of Commons on account of interested motives on the part of its members, says little for the House, and values too cheaply the influence of the trade. Surely the undoubted advance which we have made in public confidence and in our own organisation entitles us to believe that our influence has strengthened instead of weakened, and that we need have no hesitation in putting forward our claims so long as these can be proved just and right.

The CHAIRMAN said that this paper, and the address delivered by Professor Fraser at the opening of the session, dealt with topics of great interest to them at the present time. These two communications were, in that respect, the most important that had come before the Society during the present session. He hoped there would be a well-considered discussion on Mr. Storrar's paper.

Mr. J. B. STEPHENSON said that, strongly as he felt on the subject, he thought he could add but little to the paper. There might be one or two little points on which he would be inclined to differ from Mr. Storrar's views. The mere mention of the *non possumus* argument in regard to legislation aroused his indignation. Mr. Storrar's paper was a most judicious and sensible one, and it was not every day they had the situation put before them in such a lucid and practical way.

Mr. MACKENZIE was of opinion that the subject was so important to the trade that they should not, at that late hour, enter upon the discussion of it. He would suggest an adjournment to a full meeting of the trade to obtain a good discussion. He referred generally to the apathy of the trade, and said that if they could all join together and be unanimous, they could pass any reasonable measure.

Mr. Nisbet agreed with the view that the discussion on the paper should be adjourned; and Mr. Boa also was disposed to agree to an adjournment. The chairman expressed himself as favourable to this course, and

Mr. STORRAR thought that there would not be any difficulty about his coming to another meeting. He would not like an adjournment for the purpose of discussing merely his paper, but of considering the question generally, and being, if possible, of real service to the trade.

It was then agreed that a full discussion of the whole question should be obtained at, if possible, a representative meeting of the trade, taking Mr. Storrar's paper as a basis. Thereafter, Mr. Dott and Mr. Lunan gave demonstrations, and Mr. Hill called attention to recent museum donations.

## Obituary.

BROOKE. - On March 12, Mr. Charles Brooke, chemist and druggist, Twerton-on Avon, Bath. Aged 79.

COLLIER. - On March 24, at his residence, Sheffield, Dr. W. H. Collier, late of Brook House, Carbrook. Aged 48. Dr. Collier was a native of Sheffield, and studied at the School of Medicine in that town, eventually opening a chemist's shop at Carbrook. Since obtaining the degrees of physician and surgeon, he has practised successfully at Carbrook, Southport, and Sheffield.

DOWNES. - On February 28, Mr. Foster Donald Downes, chemist and druggist, late of Gladstone Street, Manchester. Aged 47.

JACKSON. - On March 11, Mr. William Jackson, chemist and druggist, Mansfield, Notts. Aged 63.

THOMPSON. - On March 24, Mr. Thomas Thompson, chemist and druggist, Bridge Street, Sunderland. Aged 43.

TURNER. - On March 15, Mr. Robert Turner, chemist and druggist, Oundle, Northamptonshire. Aged 68.

## PHOTOGRAPHIC NOTES.

(Written for THE CHEMIST AND DRUGGIST.)

### EIKONOGEN.

Formulae for eikonogen developers are "as thick as autumnal leaves in Vallombrosa"; never a photographic journal appears but several new formulae are recommended. The best we have yet come across is that suggested by M. Leon Warnerke, one of the pioneers of photographic discovery:—

	Parts
Sodium sulphite .. .. .	40
Boiling distilled water .. .. .	100
Eikonogen .. .. .	10
Caustic potash .. .. .	10

Dissolve in the above order. It should be filtered and bottled away whilst hot, and, for use, diluted with two or three parts of water for strong contrasts, but for softer negatives with seven to eight parts of water. In this formula, however, it must be noted that the salts will not all dissolve, there being too little water; we have found making the bulk to 200 parts better. It might be as well to suggest to chemists to caution their customers who are dabbling with caustic potash or soda, to be careful about handling these in the solid state. An amateur friend has had one of his fingers so severely cauterised by a small piece of soda finding its way unnoticed under the nail of his little finger, as to necessitate the entire removal of the nail and surrounding flesh.

### A NEW PRINTING-OUT PROCESS.

Dr. W. J. Nichol, D.Sc., has patented a new iron and silver printing process, which promises to be of some value, no hypo being used to fix the prints. It is called the "Kali-type" process, and paper is coated with:—

	Per cent.
Ferric oxalate .. .. .	5
„ tartrate .. .. .	5

On exposure the ferric salt is reduced to ferrous, and is developed by floating, as in the platinotype process, on

	Per cent.
Potassic oxalate .. .. .	10
Nitrate of silver .. .. .	1½ to 2
Ammonia, q.s. to clear	

It is, when fully developed, washed in three baths of

Ammonia .. .. .	1 oz.
Citrate of soda .. .. .	1 ..
Water .. .. .	1 gallon

We have been also favoured with specimens of another printing-out process, which at present is a secret, but from a sample of the paper tried personally we can promise a grand future for it, as it possesses some advantages which would be invaluable in every-day practice. We may add that the process has been discovered by an ex-knight of the pestle and mortar, who threw up the pestle, after a year's trial of life as a chemist's apprentice, in disgust, but who has still some faint glimmerings of the smattering of chemistry learnt during that time.

### SIXTH CENTENARY OF THE MONTPELLIER UNIVERSITY.

—The Montpellier people are going to celebrate the completion of the sixth centenary of the foundation of their university. The Montpellier school already possessed considerable renown when, in 1289, Pope Nicholas IV. elevated it to the rank of a university, a short time before he conferred the same honour upon the School of Coimbra, in Portugal. The Montpellier University has always maintained a high degree of excellence, and the students visit it from all parts of the world. The festivities will commence on May 22 next, and a large number of delegates from French and foreign universities, as well as many scientists, are expected to be present. President Carnot will preside at the festivities. We may mention that the chair of pharmacy at Montpellier is occupied by Professor J. Leon Soubeiran.



## Legal Reports.

### PROSECUTION UNDER THE PHARMACY ACT.—THE LABELLING OF PROPRIETARY MEDICINES.

At the Mansion House Justice Room on Friday, March 21, before the Lord Mayor, Mr. John Jackson Matthias, pharmaceutical chemist, of 6 Railway Place, Fenchurch Street, City, was summoned for unlawfully selling by retail on January 15, 1890, to one Henry Woon a certain poison, to wit, three bottles of a mixture known as syrup of camphor, or "cough linctus," which mixture contained nearly  $\frac{1}{2}$  grain to the fluid ounce of acetate of morphine, the bottles in which such poison was contained not being distinctly labelled with the name of the article "acetate of morphine," and the word "poison" against the form of statute in such case made and provided.

Mr. C. F. Gill, barrister, instructed by Mr. F. J. Williamson, of the Solicitor's Department of the Treasury, appeared for the prosecution; the defendant was not represented by counsel.

Among those present in court were Mr. A. Braxton Hicks, the Mid-Surrey coroner, Dr. Stevenson, analyst to the Home Office, the President and Treasurer of the Pharmaceutical Society, and others.

After reading the summons, the chief clerk asked the defendant whether he pleaded guilty or not guilty.

Mr. Matthias: I plead guilty to having sold it, but I depended upon custom.

The Chief Clerk: Then that is a plea of not guilty.

Mr. Gill: My lord, I appear here, instructed by the Public Prosecutor, to support this summons—

The Defendant (interposing): I withdraw my plea of not guilty, and plead guilty.

Mr. Gill: Do you plead guilty to the summons which has been read?

Defendant: Quite so.

Mr. Gill: I think the defendant has acted rightly in pleading guilty to the summons, because, as a matter of fact, legally there was no answer to the charge, although I quite understand what it is he says as to having relied on what he supposed was custom as to selling these articles. This is a summons, my lord, under the 17th section of the Pharmacy Act, 31 and 32 Vic., chapter 121, which was passed in the interest of the public in order that certain safeguards should surround the dealing with poisons, and that there should be certain provisions with regard to persons who are entitled to deal in them. The offence contained in this particular section, under which the defendant has been summoned, is the offence of selling poisons without having printed on the label the word "poison." That, you can well understand, is a very great safeguard, where bottles are left about, and where risks are run as a consequence of a person's attention not being attracted to it. Steps were taken in regard to this particular case in consequence of an inquest which was held on a child who had died through swallowing—I will not say a great quantity, but a considerable quantity—a bottleful, I believe, or nearly full, of what is sold as "Matthias's compound syrup of camphor, or cough linctus." A bottle of this was purchased at the shop of the defendant, and the purchaser, thinking it was an ordinary cough medicine and in no way dangerous, treated it as he would an ordinary medicine bottle and left it about, the result being that this child drank it, with fatal results. The matter was inquired into very fully, and in order that the public should be thoroughly informed as to what the state of the law is—

The Lord Mayor asked to be shown one of the bottles, and one was handed to him.

Mr. Gill (continuing): In order that the matter should be thoroughly inquired into, the contents of the stomach of the child were submitted to the great authority, Dr. Stevenson, who found evidence of poison, which upon analysis he discovered to be one of the poisons mentioned in the schedule of the Act. I think a bottle contains as much as two grains of acetate of morphine, which is a preparation of opium, and a very small part of a grain might be fatal to a child. The gentleman who conducted this inquiry, Mr. Hicks, the coroner, thought it desirable that some bottles of

this cough linctus should be purchased at the shop of the defendant, and he accordingly instructed an officer to make the purchase, and one bottle was submitted to Dr. Stevenson for the purpose of analysing the same quantity of this mixture as was taken by the deceased child to ascertain the quantity of poison in a bottle. As a result, it was ascertained that there were 2 grs. of this acetate of morphine in a bottle. It is sold, as you see, sir, with a caution in this form:—"To be kept out of the reach of children, as it is sweet, and they may take too much"; which is not at all the kind of caution to suggest to anyone that the consequence of taking too much would be fatal, and would not be acted upon in anything like the same way a caution should be if the bottle had been labelled "poison." There is no suggestion in any way on any part of the label that this contains poison. The defendant seems to be under the impression that the fact of its having upon it a Government stamp in some way made it a patent medicine, which is an error a great many persons labour under. That the fact of the revenue stamp being on it constitutes it a patent medicine is a great mistake: it merely becomes a proprietary medicine, and anyone who sells an article such as this, which he sells as being good for any particular complaint, and desires to make a special sale of, must have on each bottle a stamp according to the value of the article. Different Stamp Acts have been passed from time to time dealing with the selling of nostrums of this kind. There are, I believe, very few patent medicines, as a person would have to describe what the contents were, which they would be undesirous of doing, preferring to keep them a secret. Having regard, then, to the statement made by the defendant himself at this inquest, it was thought desirable that proceedings should be taken by the Public Prosecutor on a representation made to him by the Coroner, in order, as I have said before, that the public might thoroughly understand that persons selling proprietary medicines are bound to comply with the 17th section of the Pharmacy Act, and if a medicine contains any of the poisons scheduled in that Act, there must be distinctly printed upon the box, bottle, vessel, wrapper, or cover, as the case may be, the word "poison," so that that protection may be afforded to the public which the Act was intended to provide. I may say at once that this prosecution is rather instituted from that point of view than from a desire to punish the defendant, especially when he states that what he did he did while acting under a wrong impression, which no doubt, is true.

The Lord Mayor: Which section of the Act do you rely on?

Mr. Gill: The 17th section. (Reading.) "It shall be unlawful to sell any poison, either by wholesale or by retail, unless the box, bottle, vessel, wrapper, or cover, in which such poison is contained, be distinctly labelled with the name of the article and the word 'Poison.'"

The Lord Mayor: The defendant has pleaded "Guilty," but if you will pardon me for saying so, what you have just read does not carry out what you have said, *i.e.*, "If a mixture contains any poison." It seems to me that that is a very great defect in the statute. I don't see any such words as those myself. The Act says, "It shall be unlawful to sell any poison." That is poison, but I don't see anything in that section about "If a mixture contains any poison."

Mr. Gill: That, sir, I would suggest, would not be arguable, because if a person sells a bottle of mixture of any kind, any ingredient of it being poison, he sells a poison, because he sells every ingredient contained in the mixture. The Act would be perfectly useless if a person could sell poisons by mixing them with other articles. If he sells a mixture of this kind, he sells everything the bottle contains, and sells a quantity of a poison which is one of the poisons scheduled in the Act, namely, a preparation of opium.

The Lord Mayor: I quite admit that, but as you represent the Treasury, and this is a matter of great public importance, I should just like to suggest whether it would not be better and clearer if after the words "unlawful to sell," the words "any mixture or compound containing poison," were inserted in the section. I remark a very great distinction. It cannot apply in this case, as the defendant has pleaded "Guilty."

Mr. Gill: I think these words will be construed as covering any mixture containing a poison. No one would sup-



pose that a poison itself would be sold without being labelled.

The Lord Mayor: That might be understood by lawyers, and I quite agree with you. I should put that construction upon it myself; but a criminal statute like this should be so clearly drafted that any person could understand it. I must say that when my attention was first called to this matter, I was much struck by the omission of the words, "any mixture or compound containing." Any man of business would read "Unless the box, &c., in which such poison is contained be distinctly labelled with the name of the article and the word 'Poison,'" to mean poison, and nothing but poison. It is open to wrong construction, and I think the statute ought to be made clearer.

Mr. Gill: The latter part of the section explains what is meant by any person selling poisons, because there is a direction for any chemist dispensing a medicine which contains among the ingredients a poison, and where he is making up a prescription from a physician which might contain among the things prescribed some poison.

The Lord Mayor: That does not alter the fact, I quite see that. That is when he is dispensing for a patient.

Mr. Gill: It would be impossible to put on a bottle of this kind the different quantities of the different articles that go to make up that medicine.

The Lord Mayor: But if the statute contained the words, "Or any mixture or compound containing poison," it would be compulsory on the part of the seller to call the attention of the buyer to the fact that the bottle contained poison.

Mr. Gill: I quite see what is passing in your lordship's mind, but that distinction has not arisen in the minds of those who have made a mistake or contravened the statute. I think they thought that they were in some way protected by the stamp upon the bottle.

The Lord Mayor: I discuss this with all submission, seeing that you represent the Treasury, who have taken up the case, not for its intrinsic merits or demerits, but on public grounds, in order that vendors of medicines should appreciate their position to the fullest in respect to the statute. I again say that the section ought to be amended by the addition of the words, "Or any mixture or compound containing poison," so that those who are dealing with the mixtures and compounds should know what they are doing.

Mr. Gill: I am quite sure that the observations that have fallen from your lordship will gain the publicity and get the attention they deserve, and possibly there may be some further legislation in regard to these matters. The only witness I propose to call before you is a witness as to the purchase of the three bottles.

Mr. Matthias: I admit that.

Mr. Gill: Then I now propose to tell you the nature of the case I propose to put before your lordship; to clear up any misapprehension in the minds of the public and owners of proprietary medicines and patent medicines, neither the fact of a revenue stamp being upon the bottle, nor the fact of having a patent would protect them unless they complied with the 17th section of the Act.

The Defendant: I have purveyed this preparation for over thirty years, and I did not know it was necessary to have the word "poison" on it. It is admitted that this is a test question, but there are many similar preparations which have a very large sale.

The Lord Mayor: Do you hear that, Mr. Gill?

Mr. Gill: Yes, my lord; but the difficulty is that the occasion does not arise with regard to other articles. You see, no one has a roving commission to go about analysing these articles. No doubt a number of deaths do arise through the carelessness of people in leaving these articles about, and when the occasion does arise, certainly after this prosecution, the matter will always be pressed to the utmost, and in any instances of proprietary medicines being sold without being properly labelled proceedings will be taken.

The Lord Mayor: I called your attention to the matter, having regard to what the defendant has just said. No doubt many people would plead that they did not know they were bound to label a preparation of this kind as a poison.

The Defendant: I was speaking to one of the largest retail druggists in this country yesterday, and he told me that it would be impossible to carry on business if the Act of Parliament is to be so construed. Why, we would not be

able to make up a bottle of diarrhoea medicine, which would not be complete without a little opium. It is a very serious question indeed.

The Lord Mayor: There is a wide distinction between labelling poisons and labelling those mixtures containing poisons. I observe a great distinction.

Mr. Gill: With regard to this question of mixtures containing poisons, a bottle should have on it a label marked "poison," which should stand out in relief, so that attention would be directed to it.

The Defendant: This bottle was taken home and placed on a table unopened, and I take it that a label would not have prevented the child from drinking the contents. That came out in evidence at the inquest, but Mr. Braxton Hicks suppressed it.

Mr. Gill: I have the depositions before me, and I say that if the bottle had been labelled "poison" it would have been placed in some place of safety.

The Lord Mayor (to the defendant): Have you anything else to say, Mr. Matthias?

The Defendant: May I call a witness to prove what the custom has been?

The Lord Mayor: Oh, no.

Mr. Gill: There can be no question that can affect the statute.

The Lord Mayor: Having regard to the fact that this is a test-case, Mr. Gill, I propose fining the defendant 10s., and 2s. the cost of the summons. I cannot help regretting, at the same time, the fact that the section of the Act is not clearer, and I hope those in authority will take notice of the matter.

Mr. Gill: Strictly speaking, it is very important to the trade of a chemist that this section should be rigidly enforced. It is very much in their interest.

The Lord Mayor: Very much indeed. After what has occurred, I think we are agreed on the point, Mr. Gill, as to the necessity of making this section more explicit?

Mr. Gill: Yes, sir, and I have no doubt it will be considered. As far as the public generally are concerned, any suggestion of that kind which makes a section more clear it is desirable to adopt.

The Lord Mayor: It must be; even chemists are not lawyers. I am very much obliged to you for the very clear manner in which you have put the case before me.

#### SAL VOLATILE.—THE AUTHORITY OF THE PHARMACOPŒIA.

AT the Sheffield Town Hall yesterday, before the stipendiary magistrate, Joseph John Riding, chemist, 19 London Road South, was charged with selling to Mr. John Poole, an inspector of nuisances for the borough, a quantity of sal volatile which was not of the description and quality required by law. There was a second charge against Mr. Riding of a similar nature, but in reference to a bottle of medicine. Mr. Sayer, who appeared to support the prosecution on behalf of the Health Committee of the Corporation, said that these summonses had been taken out under the Sale of Food and Drugs Act, 1875. On January 24, Inspector Poole went and purchased a quantity of sal volatile from Mr. Riding, and this had been sent to Mr. Allen, the borough analyst. His report was: "Sal volatile is a popular name, and official synonym for the preparation described in the British Pharmacopœia as aromatic spirit of ammonia. The neutralising power of the sample indicated a strength about 9-16ths of that of the British Pharmacopœia preparation, and the amount of carbonate of ammonia contained in it was less than half of the proper amount. The sample was also deficient in alcohol." This case involved the very important point which had been before his worship before as to whether the British Pharmacopœia should not by law be the recognised standard for medicines and drugs. He would remind his worship of the case of *White v. Byewater*, in which it was pointed out that the British Pharmacopœia was the only standard which should be acted up to. In their decision the Lord Chief Justice and Justice A. L. Smith both upheld this standard.

The Stipendiary: Then you hold that the London Pharmacopœia cannot be taken as a standard.

Mr. Sayer: I say so. This was made so by certain Acts of Parliament, and therefore I contend that the London Pharmacopœia has no standing.



John Poole, inspector of nuisances for the borough, said on January 24, last he called at the defendant's shop and saw Mr. Riding. Witness asked for a prescription to be dispensed. He was told to come again, and later on in the day he did go, and then asked for 2 oz. of sal volatile, for which he paid 9d. He told Mr. Riding he had purchased both articles for purpose of analysis, and offered to divide them with him. He did divide the article with the defendant, who told him that he sold all his drugs as genuine articles, and showed him an invoice with the initial "P. L." on it, and which meant London Pharmacopœia.

Mr. Alfred Henry Allen, borough analyst, said the certificate which Mr. Sayer had read was the result of his analysis. Mr. Sayer: Do you think it desirable that there should be one standard? His Worship: I am afraid we cannot take that here. We must administer the law. Mr. Sayer: Well, you know the standard of the British Pharmacopœia?—Yes. Do you know that it is different from the old London Pharmacopœia?—It is somewhat different, but the last edition of the London Pharmacopœia was issued in 1851. The sample I analysed was not in accordance with the British Pharmacopœia, nor was it strictly or approximately in accordance with the London Pharmacopœia.

Defendant contended that the article he had sold to Poole was genuine. He would admit that it was rather stronger in ammonia and spirit than the B. P.

Mr. Sayer: Rather weaker.

Mr. Riding: Well, I say now as I said then, that it is a true, genuine, and unadulterated article. He told Mr. Poole before he went out of the shop that if he wanted sal volatile of the British Pharmacopœia he had not got it. He put on the label "P. L." to show it was the London Pharmacopœia. Mr. Riding handed up a letter he had received from the wholesale house from which he purchased his drugs, and afterwards he submitted that Poole had got what he asked for.

A question arising as to the label marked "P. L." it was stated by Poole that Mr. Riding marked the label at the time of sale.

The stipendiary held that a conviction must follow, and be must for the purpose of this case decide that defendant was bound to sell by the British Pharmacopœia.

Mr. Sayer said the second summons was under section 7 of the Act, and the section read: "No person shall sell any compound article of food or compound drug which is not composed of ingredients in accordance with the demand of the purchaser, under a penalty not exceeding 20l." A few days before January 24, the medical officer of health wrote certain prescriptions, which the inspectors of nuisances were instructed to get made up, and he was happy to say that in most cases the compositions were fairly good. In this case, however, the analyst's report stated: "I am of opinion that the said sample contains only 7½ grains of citrate of iron and quinine in each fluid ounce, equal to 60 grains in the eight fluid ounces directed to be dispensed, whereas the weight ordered in the prescription was 1½ drachms or 90 grains in eight ounces; hence the quantity of the active ingredients of the medicine dispensed would only be two-thirds of that ordered. The citrate of iron and quinine employed was not only deficient in weight, but somewhat defective in quality, for it contained only 13½ per cent. of its weight in quinine, instead of 15 per cent., which is the proportion directed in the British Pharmacopœia. The sample was analysed before it had undergone any change in its constitution that would interfere with the result of the analysis." He need not dwell on the importance of this case. Often life and death depended on the dispensing of a prescription, and it was therefore absolutely necessary that it should be compounded in strict accordance with the prescription.

Dr. Thomson, Medical Officer of Health for the borough, said he wrote the prescription and made several copies of it, and one of them was handed to Inspector Poole to get compounded at the shop of a certain chemist. The prescription was: "90 grs. of citrate of iron and quinine, and 8 oz. of chloroform water." That would be prescribed in actual practice, and was a reasonable dose.

Mr. Allen, the borough analyst, and Mr. Poole having given formal evidence,

Mr. Riding said the medicine was compounded according to the British Pharmacopœia, and was supplied in bulk by

the same wholesale house as supplied the sal volatile. Whatever was written on that prescription be put into the bottle, and made it up properly.

Mr. Allen, re-called, said he dried up some portion of the mixture, and it showed in that state as well 60 grains to the 8 oz.

The stipendiary, in giving judgment, said there were two cases. First as to the sal volatile. It was certainly clear that Mr. Riding put the letters "P. L." on the label, meaning Pharmacopœia Londinensis, and it also appeared there was no recipe for sal volatile in the British Pharmacopœia until the year 1888, the previous edition being issued in 1885. But there was the case which had been decided in the Queen's Bench, and it seemed to point to the opinion that when there was a recipe in the British Pharmacopœia, that recipe had the monopoly over all other recipes, and though in accordance with other Pharmacopœias, the British Pharmacopœia must overrule them and supersede them, and the chemist must sell by that. That was the view he felt bound to take against his own ideas. The costs would be 8s. He thought a small sum would do for a fine. Therefore Mr. Riding must pay 5s. and the costs. Then they came to the second case, in which there was a bottle of medicine which came under the description "compounded drug." Against that there were two complaints, one of which was that where there ought to have been 90 grains there were only 60 grains. That was two-thirds of the whole. That he must view as carelessness on the part of Mr. Riding. In the second part there was some deficiency in the quality, it being only 13½ instead of 15 per cent. How that came about was not clearly explained. They might consider that it was due to the wholesale supplier of Mr. Riding. The latter believed it to be according to the "B. P." It was ordered to be so, and he saw no reason to doubt him. The costs in this case were 18s. 6d. He took it that the case had been brought more with the intention of making Mr. Riding more careful.

Mr. Sayer: That is so.

The Stipendiary: Well, I will make the fine 20s., and the costs.

At the Sheffield Town Hall on March 25, before the stipendiary magistrate, Mr. John Parkin Hewitt, chemist and druggist, carrying on business at 66 and 68 Division Street, and 71 London Road, South, and Mr. John Turner, M.P.S., chemist, 118 South Street, Moor, were both summoned for having on January 24 sold to Mr. John Poole, inspector of nuisances, a certain drug—to wit, sal volatile—which was not of the nature, substance, and quality demanded by the purchaser. Mr. Sayer appeared on behalf of the Corporation to support the summonses, while Mr. A. M. Wilson represented Mr. Hewitt, and Mr. R. Fairburn appeared for Mr. Turner. The case against Mr. Hewitt was taken first. Mr. Sayer said that on the date named the inspector called at the defendant's shop and purchased 2 oz. of sal volatile, for which he paid 9d. This was sent to Mr. A. H. Allen, the borough analyst, for examination, and the result of his analysis showed that the sample was almost wholly destitute of carbonate of ammonia, which was the leading constituent of sal volatile. Its strength, as indicated by its neutralising power, was only about two-thirds of that of the British Pharmacopœia preparation. It was also deficient in alcohol. Sal volatile was not liable to undergo material alteration by keeping. Mr. Sayer said he believed the defence was that the sal volatile was in the same condition as when defendant received it from the wholesale house; but in that case Mr. Hewitt could have protected himself if he had obtained the warranty which was provided for by the 25th section of the Act of 1875. Mr. Muir Wilson said he admitted all the facts, but he submitted that the article as sold by the defendant was as it was when he received it from Messrs. Hodgkinson, Prestons & King, of London. They were a well-known firm, and when the defendant ordered his drugs he had every faith that they would be fully up to the B.P. standard. He had not thought it necessary to obtain the warranty spoken of—in fact, that process was a very long and troublesome one. Directly Mr. Hewitt was informed that the inspector had been to his shop he wrote to the firm with which he dealt, telling them of the fact, and also informing them that as a result of Mr. Allen's analysis he had received a summons



to attend at the Sheffield Town Hall. He also forwarded them the part of the sal volatile left him by the inspector, and asked them to examine it and state what there was that was deficient, and why. He also added: "I should have thought that for the credit of your houses all drugs that left it would have been genuine, but, according to his analysis, such is not the case. The article in question was sold in exactly the same condition in which it was received, and has been kept in a well-stoppered bottle during our ownership of it." In reply to this letter Messrs. Hodgkinson, Prestons & King wrote: "We regret to find that you, in common with other chemists, are having trouble with the spt. am. arom. As you are no doubt aware, our laboratory was burned down on July 14, and during the time of rebuilding we had to depend for most of our preparations upon other houses. The spt. am. arom. P.B. in question was obtained from a respectable firm, and was ordered, bought, and paid for by us as P.B. We cannot hold ourselves responsible for any loss of strength in a volatile preparation six weeks after it has left our premises." He (Mr. Wilson) read these letters to show that Mr. Hewitt had not had any intention to defraud the public, but that, as the article he purchased was warranted to be B.P., he expected that it was such when it was sold to the inspector. The stipendiary hoped that the explanation would receive the same publicity as the complaint had. Mr. Sayer next proceeded with the charge against Mr. Turner, and produced the analyst's report, which showed that the sample of sal volatile purchased was almost wholly destitute of carbonate of ammonia, the strength being only about two-fifths of the B.P. preparation. The sample was also deficient in alcohol. Mr. Fairburn, on behalf of the defendant, said he got this sal volatile from Messrs. Raimés & Co., of York, with whom he had dealt for many years. The article was received on January 11, and the sale took place on January 25. As soon as Mr. Turner was informed that a summons had been issued against him, he wrote to Messrs. Raimés & Co., telling them of the fact. They replied: "We are surprised to learn that you have had a summons for the sal volatile we sent you last January. It is entered in our books as B.P., and we feel certain that it was sent B.P., and you should send the sample left by the inspector to Somerset House or Professor Attfield. We should like a sample from the bulk also to try ourselves." A portion of the part left by the inspector was sent to Professor Attfield, and his analysis substantially agreed with that of Mr. Allen. Messrs. Raimés & Co. had also written admitting that the qualities mentioned were deficient, and they had taken all the responsibility in the matter. The fact that his client had gone to so much trouble and expense, he thought, proved that he had no desire to defraud the public, but that he was selling what he believed to be what was asked for. Mr. J. W. Turner said he supplied the sal volatile to the inspector. It was taken from a new bottle that he opened to get this 2 oz. from. The bottle was just as it had arrived from Messrs. Raimés & Co. Mr. George Mott, who is in the service of Messrs. Raimés and Co., said he made this drug up and sent it to Mr. Turner. His employers took the whole of the responsibility for the deficiency of the ingredients named, but could not account for it. The absence of a little of the ammonia might be accounted for by evaporation. The stipendiary said he had listened carefully to the facts as laid before him, and to the explanation of the defendant in each case. Though he thought it would have been wise for the defendants to have obtained a warranty in respect to the goods, yet he did not think they had had any intention to defraud the public. It was, he thought, necessary in the interests of the public and for their safety, that the utmost care should be used, and he took it that it was for that object that these cases were brought. He thought the justice of the case would be met by each defendant paying a fine of 5s., and 8s. costs.

#### THE CHEMIST MILITANT.

At the Birmingham county court on Wednesday, before his Honour Judge Chalmers, Walter Knight, of Princess Road, Birmingham, advertisement canvasser, brought an action against Frederick Barlow, of Balsall Heath Road, chemist and druggist, to recover 15l. 15s. damages for personal injuries. Mr. Parfitt appeared for plaintiff, and Mr. Dorsett for defendant. Plaintiff said that he and defendant were

members of a card-playing society which met at a Balsall Heath public-house, and played for money stakes. They quarrelled over the division of the winnings, and became bad friends. At midnight on Saturday, February 1, they met in Balsall Heath Road, and, after some argument, defendant struck him violently on the face. He was knocked into the middle of the horse road, and fell, injuring his arm, and sustaining other bruises. He got up, and walked towards defendant to "remonstrate," when defendant hit him savagely a second time. Defendant then walked off, and he followed for the purpose of giving defendant into custody, but could not meet a policeman. In cross-examination, plaintiff admitted that he had called the defendant the meanest man in Balsall Heath, and a nice man to be a postmaster. Defendant was called, and said that he was talking to two friends on the night of February 1 when plaintiff came up. One of the friends suggested that he and Knight should shake hands and be friends, and placed their hands together. They shook hands, and then began to argue. Plaintiff called him a liar. Defendant said, "Do you call me a liar?" Plaintiff said, "Yes, a ——— liar!" and struck him on the side of the head. He hit out at plaintiff and knocked him down. When plaintiff got up he rushed at witness, and he was obliged to knock him down again. Plaintiff then called him a pretty postmaster and chemist to knock a canvasser about like that, and followed him home, shouting bad names. Witnesses were called on each side. His Honour, in giving judgment, said that, as a matter of law, fighting was illegal, and a man was not entitled to do more in that way than to protect himself. There was no doubt there had been a fight, and a very small one, and the question was merely one of damages. There was no doubt the defendant was provoked by the plaintiff's abuse, and it was impossible to say which actually began the fight. He was inclined to think that plaintiff, in addition to using abusive language, had made some threatening gesture, and then the defendant hit him. He should award the plaintiff a farthing damages, each party to pay his own costs.

#### SULPHATE OF AMMONIA IN DISPUTE.

IN the City of London Court on Thursday, before Mr. Registrar Wild, the case of *Forbes v. Hecker* was heard. The action was brought by the plaintiffs, Messrs. Forbes, Abbott & Lennard, chemical manufacturers, Ingram House, Fenchurch Street, E.C., to recover the sum of 40l. 5s. 8d., the balance of 6,640l. 5s. 8d., in respect of sulphate of ammonia supplied under several contracts to the defendant, Mr. Paul Hecker, trading as Paul Hecker & Co., chemical merchants, 14 Mincing Lane, E.C. The case was before the court a month ago, and we reported it at the time; Mr. Commissioner Kerr then said the case had better first go before Mr. Registrar Wild, and Mr. Lennard having opened the case for the plaintiffs, Mr. Kebbell, for the defendants, said he would show that there were some short weights, and some of the ammonia supplied was of inferior quality. What he claimed to do was to reduce the plaintiffs' claim. He had a counter-claim of 70l., which overtopped the plaintiffs' claim. Mr. Lennard submitted that the onus was on the defendants to prove the short weights alleged. Mr. Kebbell said that could not be so.

Mr. Lennard then called the attention of the Registrar to the contract note, which stated that the weighing and sampling were to be effected at the sellers' works, the buyers having the right of checking the same before the goods left, and if they failed to do this the sellers' weights and samples were to be accepted as correct. The rate charged was 11l. 18s. 9d. per ton, on the basis of 24½ per cent. of ammonia, with a proportionate reduction in price if under, but no extra charge if over 24½ per cent. The last clause said, "Each delivery to be considered a separate contract. In the event of buyer making any default in payment or becoming subject to the Bankruptcy Laws, the sellers may, at their option, cancel the contract. Any disputes on this contract to be settled by arbitration in London in the usual way."

Mr. Kebbell said he intended raising the question of fraud in the weights and quality of the ammonia.

Mr. Registrar Wild pointed out that in the absence of fraud it did not rest with the defendant to raise any question as to the accounts, as by the contract he had agreed to



take the plaintiffs' figures. The plaintiffs' weights were to be taken as correct if the defendant did not weigh the goods.

Mr. Lennard read the report of the case which appeared on March 1 in *THE CHEMIST AND DRUGGIST* to the Registrar, to show what occurred before Mr. Commissioner Kerr.

Mr. Kebbell thought the case would still have to go to arbitration, as provided for by the contract.

Mr. Lennard thought that was decided against the defendant at the last hearing; but this Mr. Kebbell denied.

Mr. Registrar Wild said the main question was the construction of the contract which the parties had entered into, and he thought, therefore, he would refer the matter back to the Court for the document to be construed.

## Gazette.

### PARTNERSHIPS DISSOLVED.

Faleckl, T., & Bate, A. T. (under the style of A. Ruch & Co.), Laurence Pountney Lane, City, glass bottle importers and merchants.  
Hallwright & Nicholls, Birmingham, surgeons and physicians.  
Patrick & Neale, Smethwick, mineral-water manufacturers.

### THE BANKRUPTCY ACT, 1883

#### RECEIVING ORDERS.

Butler, Patrick, Duke Street, Portland Place, physician.  
Hose, Richard Adolphus, Finsbury Circus, City, dentist.  
Menzies, Dr., Rochester Row, S.W., surgeon.

#### FIRST MEETING AND PUBLIC EXAMINATION.

Franklin, Edward, Ipswich, dentist.—March 28, Official Receiver's offices, Ipswich; April 17, Shirehall, Ipswich.

#### ADJUDICATIONS

Coulthard, William, Gee Cross, near Hyde, mineral-water manufacturer.  
Franklin, Edward, Ipswich, dentist.

#### APPLICATION FOR DEBTOR'S DISCHARGE.

Davies, Francis Arthur, Merthyr Tydfil, chemist.—May 15, Merthyr Tydfil.

#### ORDER MADE ON APPLICATION FOR DISCHARGE.

Black, Walter Shaw, Bedale, surgeon—discharge suspended for eighteen months.

#### SCOTCH SEQUESTRATION.

Turner, Edmund John, sèrated-water manufacturer, St. Andrews—Creditors will meet in the Procurator's Library, Cupar, April 3, at 11 o'clock. Pagan & Osborne, writers, Cupar, agents.

### EXTRACT FROM THE REGISTER OF DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1887. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision in the Act making any of these arrangements binding upon dissenting creditors.

Owen, George Burgh, 21 Broad Street, Park, and 4 Shrewsbury Road, Sheffield, chemist, wholesale druggist, and drysalter and manufacturer of oil, grease, and tar. Trustee: R. J. Evans, George Street, Sheffield. Date, March 24; filed, March 26; unsecured liabilities, 4,426l. 2s. 10d.; estimated net assets, 2,037l. 3s. 2d. Composition, 7s. 6d. in the pound, by three equal instalments, at three, six, and nine months, and assignment of debtor's estate to trustee to secure same.

### BARCLAY & SONS (LIMITED).

THE second annual ordinary general meeting of the shareholders of Barclay & Sons (Limited) was held at the Memorial Hall, Farringdon Street, E.C., on Monday, March 24, Mr. Horace Davenport in the chair. The directors' report and statement of accounts for the second year, ending December 31, 1889, showed the total subscriptions during that period to have been 170,589l. 11s. 2d., and the total profits, 4,494l. 13s. 3d. The total net divisible profits, after making deductions for bad and doubtful debts and expenses, were 4,319l. 1s. 8d., including the balance brought forward from last year. Out of this sum the directors proposed to pay interest at 5 per cent. on prepaid calls, a dividend of 6½ per cent. on ordinary shares (of which 1,000l. was paid on July 1, 1889); and 6 per cent. on preference shares (of which 782l. 7s. 5d. has been paid), leaving 47l. 4s. 10d. to be carried to next account. The amount expended for extensions on capital account during the year had been 1,210l. 15s. 8d.

The CHAIRMAN, in moving the adoption of the report, observed that it might be regarded as fairly satisfactory. There was not a business for which they could expect any brilliant surprises. It was an old-established business, going on much in the same way year after year, showing a gradual increase. Though the increase was not large, it was of a steady character, and they liked to see a good steady business rather than one which fluctuated up and down. Some shareholders seemed to consider that the results of the past year were not equal to the previous year, but they must remember that when they took over the business from Messrs. Barclay & Sons they received a bonus of five months' working, for which they did not pay. The past year was really the first actual year's working of the company as a limited liability concern, and the profits had been larger than they were in the year before. Of course, during the past year they had to pay interest on the preference shares and on the shares paid up, and managerial expenses, whereas, in the previous year, the amounts paid under those heads were only for seven months. There had also been larger reductions, and the dividend to be declared was upon the twelve months instead of upon seven. Taken in figures the results might look smaller, but the actual fact was that they received more per share in proportion this year than they did last. The directors had not been able to use all the money at their disposal, but they expected to be able to use a large amount of it shortly, as they had extended their premises, and, consequently, they would be in a position to work a larger business, when the increased stock would absorb a great part of their surplus capital. He moved the adoption of the report, and that the dividend as proposed be declared.

Mr. GROVES seconded.

Mr. MOORE, a shareholder, took exception to the chairman's statement that the business of the past year had been better than that of the previous year. Their first report gave them a profit on the turn-over of 2l. 10s. 7½d. per cent., which was reduced, on revision, to 2l. 7s. 6d. per cent. According to the second year's report, which they held in their hands, the profit had come down to 2l. 3s. 1d. per cent. He did not think that was at all satisfactory, and it showed that there must be either a lot of bad debts or an increase in the working expenses, or the sale of proprietary medicines must be going down.

The CHAIRMAN thought he had dealt with the point raised by Mr. Moore in his opening remarks. The first year's report dealt only with seven months, while last year they had had to pay twelve months' managerial expenses. Again, there were thirteen days above a year in the first report, and, in the second, thirteen days less, and that amounted to 6,000l. Then, they did not sell so many Government stamps now. Going on to answer further questions, the Chairman said they had no statistics as to the proportion of the sales of their own proprietary articles to what they bought. There was no doubt that the profit on this trade was miserably small, but that, as most of the shareholders were chemists, he thought, should not be much against them, as it showed that the business was being cut down as low as it possibly could be cut. It was not considered advisable, in the in-



terests of business, to publish all the details of their affairs separately, but the shareholders would be pleased to hear that the sale of their proprietary articles in the past year had greatly increased. Out of the capital expenditure of 2,000*l.*, 500*l.* was for the freehold, and the remainder was for building. The shareholders might have noticed that the premises were two storeys higher than they were, and, if they could only see below, they would find that they were also one lower.

Mr. MOORE: Then you have really bought no proprietary article?

The CHAIRMAN: No; we have bought nothing at all.

Mr. BROWN, who protested against the meeting being called at such an inconvenient time as 11 o'clock on Monday morning, said it seemed to him as if that had been done for a purpose. He wanted to know what was the sale of Sweeting's Specific, which was bought in the first year, during the past year; what was the meaning of the amount in the balance-sheet on debentures, mortgages, or loans—he did not know whether they had become a loan society or not; and then he should like to know the amount of the directors' fees.

Other shareholders supported Mr. Brown's objection to the inconvenient time for which the meeting had been called, and the chairman expressed the willingness of the directors for any time that would be most agreeable. It was suggested by a shareholder that the directors should submit a proper form of profit and loss account with the report in future, showing the figures more clearly than they were now given.

Mr. CHADWICKS (of Messrs. Chadwicks, Boardman & Co., auditors) gave an explanation of the accounts, and pointed out that the large number of open accounts which they had in a business of that kind made it absolutely impossible to be certain that every item was correct. With regard to the remark as to the turnover and the profit, that balance-sheet, and the prospectus, and everything concerned with the company, had proved that that was only an ordinary common bread-and-cheese business, and the rivalry that had sprung up had, of course, reduced the profits on the turnover to a very moderate amount. They would see from the accounts that the business was done at a profit of something like 2½ per cent. on the turnover—

Mr. MOORE: Less than 2½.

Mr. CHADWICKS: Now, 2½ per cent. was not sufficient to induce any large amount of rivalry in the business, which had been reduced to almost the lowest minimum of profit, consistent with healthy trading. As an accountant, he was strongly in favour of a profit and loss account, and he would recommend the directors to publish one. But they must remember that at the previous meeting there was a gentleman present, who was a rival to them, and who held a few shares in Barclay & Sons, and he thought it consistent with his position to criticise the policy of the directors. The fact was that, as men of common sense, the directors were not going to give that gentleman any very particular account of their expenditure and the management, bad debts, or anything else. (Hear, hear.) If it had not been for that reason there was no reason why there should not have been a profit and loss account published, but the accounts were open to anybody who had a substantial interest in the company to inquire into; and he was sure that if any shareholder had anything to communicate for the good of the company, the chairman and directors would be very glad to know it. He thought the whole balance-sheet to the shareholders generally must be very satisfactory; and he believed that next year, with the new buildings and the extension of their business, it would be more so. The average rate of interest on their investments, added Mr. Chadwicks, answering Mr. Scagrove, was between 3 and 3½ per cent. Some discussion took place upon the question of the advisability of returning part of the unused capital, but the directors did not think that it would be prudent to do so, in view of the contemplated extension of their trade, which would involve considerable outlay for the increase of stock. With regard to Mr. Brown's question about directors' fees, the articles of association fixed them at 300*l.*, and, said the Chairman, "We do not feel bashful in taking them—not a bit; I am not going to apologise for that."

Mr. BROWN asked what were the gross profits for the year, and the chairman replied that he was advised that it would

be injudicious to state the gross profits. The directors had power to lend money, although they were determined to use that power cautiously; but if they saw the opportunity of helping a man to open a good account with them by lending him 200*l.* or 300*l.* to assist him in his business, they saw no reason why they should not do so, the security being good. After some further discussion as to details of management and certain items in the accounts, with reference to a strong appeal was made by a shareholder to the directors to agree to the publication of a profit and loss account. It was his belief, he said, that the directors were a thoroughly upright and honourable body of men; but why pursue the present policy of secrecy and concealment? It was in the interests of the company that everything should be open as the light of day. The Chairman announced that as it seemed to be the wish of the shareholders that they should have a profit and loss account rendered with the annual accounts, the directors would certainly see that they had one. (Hear, hear.) The motion for the adoption of the report and accounts was then put to the meeting and carried *unanimously*.

The retiring director, Mr. John Paul Quick, was re-elected, as also were the auditors, Messrs. Chadwicks, Boardman & Co. A vote of thanks to the chairman closed the proceedings.

## WILLS OF DECEASED CHEMISTS.

THE will of the late Mr. Stafford Allen, of Parkfield, Upper Clapton, retired drug grinder, who died on October 14, 1889, has been proved at the principal Probate Registry by Mrs. W. E. Allen, S. A. Maw, and H. T. Mennell, the executors. The gross personalty amounted to 28,697*l.* 18*s.* 11*d.*, and the net to 21,206*l.* 16*s.* 10*d.* The testator leaves 100*l.* each to his executors, and appoints them trustees of his estate. He confirms in legacies various advances to his sons, and bequeaths 1,000*l.* each to the two daughters of a deceased son. After leaving an annuity of 400*l.* per annum to his widow, and directing certain amounts to be held in trust for his married daughters, he bequeaths the sum of 100*l.* each to several religious and charitable institutions, 400*l.* to his business manager, 200*l.* to his foreman, and smaller amounts to other employés. He also leaves numerous legacies to distant relations. The residue of his personalty, together with his real estate, the testator directs his trustees to realise for the benefit of his family.

By his will with a codicil dated November 27, 1888, the late Sir William Withey Gull, of 74 Brook Street, M.D., who died on January 29 last, aged 74 years, leaving personalty valued at 344,022*l.* 19*s.* 7*d.*, appointed as executors his wife, Dame Susan Anne Gull, his son, Sir William Cameron Gull, of Gloucester Street, Portman Square, the present baronet, Mr. Edmund Hobhouse, and Mr. Walter Barry Lindley, and bequeathed to the acting executors 500*l.* each, to Miss Mary Jackson 500*l.*, to two nieces 100*l.* each, to Lady Gull's maid 200*l.*, to his amanuensis, Miss Susan Spratt, 50*l.*, and to his butler, William Brown, 52*l.* 10*s.* a year for his life. The testator made heirlooms of his presentation plate and of the jewelled snuffbox given him by the Empress Eugénie, and bequeaths the remainder of his plate, his pictures, furniture and household effects and 3,000*l.* to Lady Gull, who is to have the use for her life of the house in Brook Street, and a life annuity of 3,000*l.* to commence twelve months after the testator's death. He bequeaths 26,000*l.* in trust for his daughter Caroline, wife of Mr. Theodore Dyke-Acland; and 40,000*l.* to his son, Sir William Cameron Gull, upon whom he entails all his real estate, and leaves the residue of his personal estate in trust for the purchase of real estate in England or Scotland, but not in Ireland, to be held with the entailed estate.

The will dated June 7, 1866, of the late Mr. Benjamin Newham, of Wether Moor, Rannmoor, Sheffield, chemist and druggist, who died June 6, 1888, has been proved at the Wakefield Probate Registry by Mrs. A. Newham, the widow. The gross value of the personalty amounted to 5570 *Os.* 3*d.*, and the net to 5,419*l.* 10*s.* 5*d.* The testator leaves his leaseholds and all his other property to his widow.



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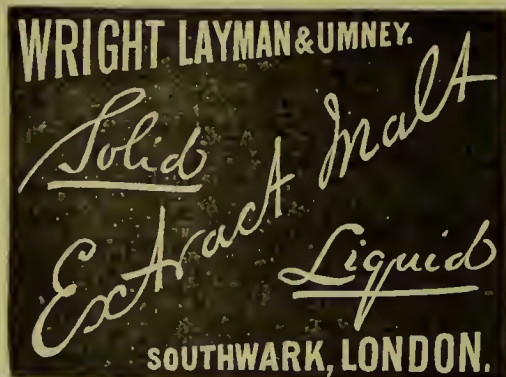
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**EDITORIAL NOTES.**

**POISONOUS PATENT MEDICINES.**

THE prosecution and conviction of Mr. Matthias at the Mansion House, under the 17th section of the Pharmacy Act, for the sale of a proprietary medicine containing morphia, which we report in full on another page of this issue, is an event of some importance to chemists. It cannot be said to reveal any new interpretation of the Act. For a number of years past we have stated in THE CHEMISTS' AND DRUGGISTS' DIARY, in giving the regulations for the Sale of Poisons, "It is sometimes supposed that patent medicines are not subject to the regulations quoted; but this is an error. The exemption of the patent-medicine trade applies only to the first fifteen sections of the Pharmacy Act, which restrict the sale of poisons to registered chemists and druggists." In a special article in the DIARY for 1881 we pointed this out very explicitly. In February, 1882, we reported a police prosecution at the Hammersmith Police Court for the sale of a so-called patent medicine containing chloral hydrate. It was argued on that occasion that the Pharmaceutical Society and everyone connected with the trade had always assumed that patent medicines were entirely excluded from the Act; but the magistrate decided against the defendant and imposed a penalty of 40s. and 2s. costs. Notice of appeal was given, but the case was not carried any further; and the Public Prosecutor, who was represented in that case by Mr. Poland, has not moved again in a similar matter until the case arose which was decided last Friday, although in the eight years' interval the law has been broken at least a million times.

The statute requires that whenever certain specified poisons are sold the vessel in which they are contained shall be labelled with the name of the article, with the word "poison," and with the name and address of the seller. As regards these requirements there is no exemption in respect to patent medicines, and anyone can prosecute. As Mr. Matthias was told, no proof of custom could avail him in the teeth of the express words of a statute, nor would it be any better defence to plead ignorance of the fact that a poison



was contained in the compound sold, though strict proof of its presence might be insisted on. The Lord Mayor himself hinted at the only possible defence when he pointed out that the Act says "it shall be unlawful to sell a poison," but does not say it shall be unlawful to sell a mixture containing a poison. We say this is a point capable of argument. To apply it to the case in question. We find that morphia (as a poisonous vegetable alkaloid), its salts, and its preparations are named. The cough mixture sold was not morphia, nor one of its salts. Mr. Gill says morphia being present was sold together with other ingredients. That may be, but, if so, where was the sense of adding "preparations of morphia" to the schedule? Then the question comes, was this compound a "preparation of morphia"? We think it was, but we are not ready to admit that the presence of any proportion of the poison necessarily makes the mixture a preparation of that poison. We should adopt the distinction once given to us by an eminent medico-legal authority, who said that he would define as a preparation of morphia a mixture which derived from the morphia in it its essential or predominant character.

Be this as it may, chemists have to reckon with this decision, and they must notice the statement made by Mr. Gill, on behalf of the Public Prosecutor, that "certainly after this prosecution the matter will always be pressed to the utmost, and in any instances of proprietary medicines being sold without being properly labelled, proceedings will be taken." That may or may not mean another prosecution eight years hence; but if it is anything more than court rhetoric, chemists cannot complain that they have not had fair warning.

We notice that Mr. Gill, following Mr. Alpe and Mr. Braxton Hicks, considers that the exemption of the making and dealing in patent medicines named in the 16th section of the Pharmacy Act can apply only to medicines actually patented—that is to say, has scarcely an application at all. This view is probably the correct one, and it may have some important consequences. We agree with Mr. Gill that it is of great importance to chemists themselves that the provisions of the Pharmacy Act in respect to the sale of all poisons should be strictly carried out. If they would realise this, and show themselves eager to obey the Act and not to evade it, they would be able to accomplish much, in the present condition of things, for which many of them think an amended Act is required.

### THE LEGITIMATE CLAIMS OF CHEMISTS.

THE question of what chemists are justified in asking from the Legislature, or, in other words, what special reward they are entitled to from the community, is again in the arena, and is attracting some attention and discussion up and down the country. A not insignificant body of opinion is evidently in existence that chemists have some outstanding, but still unsatisfied, rights; that they have not attained that substantial recognition which is their due; that they have done and are doing the State a service for which they are not being fairly compensated. In general these propositions are taken for granted, as axiomatic, as the bases instead of the consequences of argument. They may be all sound enough, but if they are ever to be put before Parliament the reasons for the claims will have to be set forth as precisely as the claims themselves.

A little practice in defining the legitimate demands of chemists and the reasons for them would be an advantageous alternative for those who have hitherto occupied

their pens principally in compiling declamatory rhetoric, about their rights and their grievances. The speeches, essays, and letters of this character which it falls to our lot to publish so frequently do not exhibit the pharmaceutical profession in a good light. To be always willing and yet afraid to strike, to be perpetually craving after the unattainable, to be continually buckling on the armour and never actually fighting is not dignified. We are promised something more like business by the gentlemen who are organising in view of the forthcoming Council election, and in their case we recognise that they are proceeding towards the accomplishment of their object in the only possible manner. But among them we notice something of the vagueness in regard to final aims to which we have already referred.

The most usual claim put forward by chemists on their own behalf is that of a legal monopoly in the sale of medicines. This has been demanded again and again, and occasionally a reason for it is vouchsafed. Generally we are told the monopoly would be quite as much in the interest of the public as in that of chemists, because they would then be sure of getting their medicines supplied by men qualified to handle them. There are two or three fallacies in this argument, but, accepting it as flawless, we may point out that the obvious reply of the Legislature, if any could be got from it at all, would be that "a means has been provided whereby the public can distinguish between a qualified man and an unqualified one by his title. If still the latter are preferred, we can interfere no further. The public must judge for itself with whom it will deal." "But," the pharmacist answers, "it is so important sick people should have their medicine pure: it is often a matter of life and death." "Yes," our adversary might respond, "but it is of at least equal importance that well people should have their milk and their meat, their bread and their groceries wholesome; their drains sound, and their houses water-tight. Should we then give a monopoly to bakers, milkmen, grocers, plumbers, and builders? In the case of chemists, however, we have recognised this argument. We give the public means of selecting a competent man, and we cannot do more without interfering with due liberty."

So much for the public interest argument. If that breaks down there is little hope; but our sanguine friends have several other shots in their locker. They say, for instance, that chemists are entitled to a reasonable *quid pro quo* for their time, trouble, and expense in fitting themselves for the business. This, as a general proposition, every one will admit. The labourer is worthy of his hire, and in an ideal state of society everyone will get exactly what he is worth. But the assumption is often made that it is the duty of the Government to provide the chemist with his due reward. This is quite a different matter, and, we venture to say, is an untenable position. Mr. Storrar, at Edinburgh, and Mr. R. O. Fitch, in a letter published elsewhere, argue as if the Legislature granted the monopoly in the sale of poisons to chemists as a reward for their self-sacrifice. But this is surely a misapprehension. Parliament says ships shall not carry passengers unless they are provided in a certain manner. That and the Poisons Regulations are provisions for the public safety, and are in no sense monopolies, nor, in the sense argued, can either be regarded as a *quid pro quo*, or a reward.

One other argument, and we are inclined to think the best of any, is sometimes used in support of the claim of chemists to a monopoly in the sale of medicines—it is, that something of the kind prevails in all European countries. It is undoubtedly forcible to point to those countries and to urge the example of their practice on our legislators. They are as likely to be wise as we are, and the general consensus



of opinion among them on this point cannot be despised. But it must not be forgotten that these countries are nearly as unanimous in regard to their general protective tariffs, and that we have deliberately discarded any such policy. We do not say whether we have advanced or retrograded, but it is a fact that our apothecary system of about a hundred years ago was pretty much the same as that which prevails in France and elsewhere now. And we may remind British chemists that it is not certain that they would be much better off if a monopoly in the sale of certain medicines were given them by law. To a considerable extent those medicines would be such as they have a practical monopoly in now, and would certainly not extend to the ordinary drugs and chemicals of large consumption. Most of these are free in the best protected countries, and it is, besides, a fact that everywhere there is a tendency among the public to buy whatever they can from the unofficial dealers, in the belief probably that from them the goods will be cheaper. The protected men suffer accordingly.

We do not by any means argue that there is nothing to be done; we have again and again pointed out directions in which we think the Pharmacy Act can be enforced, or points in which it can be strengthened. We consider the administration and the reasonable amendment of that Act have been seriously neglected, and we hope the agitation now proceeding will result in giving us a Council which will make a serious attempt to remedy glaring defects. They will have plenty to occupy them without aiming at the doubtful, but certainly unattainable, advantage of a monopoly in vending drugs and medicines.

## SCIENTIFIC WORK FOR CHEMISTS.

### III. SOAP ANALYSIS.

IN our last article we directed attention to alkali testing, and, following on the same lines, we now propose to give a brief summary of what is required in the analysis of soap. This branch of analytical work may be successfully cultivated by any pharmacist, provided he lives in a district where the use of quantities of soap for the purposes of the cloth manufacturer is on a scale which would secure an amount of analysis that would be likely to return reasonable compensation for his time and trouble. Private families rarely require their soap analysed, being content to take on trust the assertions of the enterprising manufacturer or to rely on the more accurate knowledge derived from personal experience and observation.

Soap is extensively used in every manufacturing town for the purpose of cleansing and purifying the fabrics, and it is of the utmost consequence that it should be of a uniform character. This can only be ascertained by analysis; and however much confidence manufacturers may have in the firms which supply the soap, there is, in the nature of things, frequently occasion to have recourse to the chemist. For the purpose of ascertaining the value of soaps as detergents, the following points must be kept in view:—Whether the soap is for use in the toilet, or whether it is to be employed in the general cleansing of fabrics; and, if for the latter purpose, the quality and delicacy of the fabrics and colours of such fabrics must be taken into consideration.

The composition of soap from a chemical point of view is essentially that of a salt—that is, the product of the chemical union of a base and an acid. The acid constituent of soap is generally a mixture of stearic, palmitic and oleic acid, the basic portion being either potassium or sodium. The potassium salt of these acids is usually known as soft soap, and the sodium salt as the ordinary hard or yellow soap

of commerce. The alkali may exist in several conditions, either combined with the fatty acids, or uncombined as carbonate, or more commonly as caustic alkali. The care with which the soap has been made, and its age, determine to a large extent, the condition in which the alkali occurs.

Soap analysis is partly gravimetric and partly volumetric. For the former a balance is necessary, but as the quantities employed are not very minute, the Stone's balance already referred to will answer the purpose satisfactorily. The apparatus mentioned in our last article are also necessary in soap testing, and in addition to these a water-bath will be required. Standard solutions of hydrochloric and nitric acids are necessary, and these are most convenient when prepared of normal strength. Normal hydrochloric acid ought to contain exactly 36.37 grains of pure acid in 1,000 grain-measures, and is prepared as follows: into a 10,000 grain flask, are placed 1,808 grains of hydrochloric acid *s.g.* 1.1, and distilled water is added till the 10,000 grain mark is reached, at the required temperature (16° C.). This furnishes a solution approximately normal, and its exact strength may be determined by titration with an accurately weighed quantity of pure sodium monocarbonate. The solution of nitric acid requires to be only approximately normal. A decinormal solution of silver nitrate, prepared by dissolving 170 grains of pure silver nitrate in 10,000 grain-measures of distilled water, is used for estimating the chlorides in the soap. Alcohol of 96 per cent. strength is also required, and yellow chromate of potash free from chlorides.

### ESTIMATION OF FAT AND TOTAL ALKALI.

A hundred grains of the soap are dissolved in about 3 oz. of distilled water with the aid of heat, taking care that none of the contents boil over. When all the soap is dissolved the beaker, with its contents, is brought beneath the burette containing the standard hydrochloric acid, and a few drops of litmus, or methyl-orange, having been added to the soap solution, the acid is run in until a red or pink colour is produced. The number of grain-measures run in is now read off, and the calculation made therefrom, each grain-measure being equivalent to .031 grain of sodium oxide ( $\text{Na}_2\text{O}$ ), if hard soap is being tested, and .047 grain potassium oxide ( $\text{K}_2\text{O}$ ), in the case of soft soap. The decomposed soap is now heated on a water-bath until the fatty matter completely separates as an oily layer on the surface. It is then set aside to cool, when the aqueous portion is decanted on to a wetted filter, the fatty matter being washed with a little pure water, which is also passed through the filter. Any fat adhering to the filter is now washed out by means of warm alcohol into the beaker containing the remainder of the fat. This is dried to constant weight on the water-bath, cooled, and weighed in the beaker, the weight of the beaker being subtracted. This gives the weight of the fat, and as 100 grains were taken to begin with, it also gives the percentage of fat in the sample. If the nature of the fat requires to be ascertained, 300 or 400 grains of soap will have to be treated, and the fat separated as described.

### MOISTURE.

About 20 grs. of the soap is cut into fine shavings, accurately weighed in a small porcelain capsule, and heated in an air-oven for about two hours at a temperature of 120° C. After being cooled in a desiccator, the whole is weighed, and the loss in weight equals the amount of water in the quantity taken.

### UNCOMBINED ALKALI.

The dried residue, viz. that obtained after drawing off the moisture, is transferred to a small beaker, with  $\frac{1}{2}$  fl. oz. of



96-per-cent. alcohol, and dissolved. If the soap contains impurities such as carbonates, silicates, &c., these will remain undissolved, and should be allowed to settle down, and the dissolved portion decanted into a clean beaker. A few drops of alcoholic solution of phenol-phthalein are added, and if a pink coloration is produced, it shows the presence of uncombined or caustic alkali. The amount of this is determined in the same way as the total alkali, by means of normal hydrochloric acid, the pink colour disappearing as soon as all the free alkali is neutralised. The quantity of free alkali found is deducted from the total, and this gives the amount of combined alkali.

#### CARBONATES.

As a rule, carbonate is either entirely absent or present only in very small quantity. It is therefore usually neglected and classed along with combined alkali. Where it is present in considerable quantity, it may be determined in the residue insoluble in alcohol; but the process is one of difficulty, and demands considerable experience, and special manipulative skill.

#### CHLORIDES.

Twenty grains of soap are dissolved in 800 grain-measures of distilled water, and decomposed with a very slight excess of the approximately normal nitric acid, the aqueous portion being passed through a wetted filter and made up with distilled water to 1,000 grain-measures. Two hundred and fifty grain-measures of this solution (B) equalling 5 grs. of soap, are neutralised with sodium carbonate, and a few drops of solution of neutral chromate of potassium added. Decinormal silver nitrate solution is then run in from the burette until the red chromate of silver is permanent. The number of grain-measures is then noted, and the chlorides calculated therefrom, each grain-measure being equal to 0.00584 grain sodium chloride, or 0.00746 gr. potassium chloride. The titration of chlorides with argentic nitrate, and potassic chromate as an indicator, is best carried out in a white porcelain capsule, and it is desirable to have another capsule standing side by side, in order to check the colour.

#### SULPHATES.

Two hundred and fifty grain-measures of Solution B are taken, and a slight excess of barium nitrate added. The whole is heated in a heater to the boiling point, and then filtered through a tared filter. The precipitate is dried on the filter to constant weight, the tare of the filter deducted, and the residue calculated as sodium or potassium sulphate.

#### SILICA.

Fifty grains of soap are ignited in a porcelain or platinum crucible until all the carbonaceous matter is burned off. The residual ash is treated with concentrated hydrochloric acid, and the whole evaporated to complete dryness over a water bath. This decomposes the silicates into silica ( $\text{SiO}_2$ ) and chlorides of the bases. The latter, which are soluble, are dissolved with warm dilute hydrochloric acid and washed on to a filter. The residue is washed with warm water, dried on the filter at  $100^\circ \text{C}$ ., and weighed as silica, which, if need be, may be calculated into potassium or sodium silicate.

#### INSOLUBLE MATTER.

The insoluble matter present in a soap refers to that portion which is insoluble in water, and usually consists of lime, sand, &c. When it exists in weighable quantities, the determination is arrived at by dissolving 100 grains of soap in water, decanting the soluble portion, washing the soluble residue thoroughly on a tared filter, drying at  $110^\circ \text{C}$ ., and weighing.

#### UNSAAPONIFIABLE OILS.

If it be desired to determine the amount of hydrocarbons and other unsaponifiable oils present in soap, a weighed portion of soap is dissolved in water by the aid of heat so as to form a moderately dilute solution. This is shaken up, when cold, with a little ether, and allowed to stand until the ethereal solution separates. The ethereal layer is withdrawn by means of a pipette or separating funnel, the ether evaporated on a water-bath, and the residual oil weighed. It is sometimes necessary to ascertain the nature of the fatty matter contained in a soap, and when this is required, we would recommend for consultation Allen's "Commercial Organic Analysis," Carpenter's "Soap, Candles, Lubricants and Glycerine" (Spon), or Cameron's "Soaps and Candles" (Churchill), the first being the most useful.

When the analysis is completed the quantities of the different substances should be calculated into parts per 100 of the soap, and entered as such in the report. It will generally be found that the total results amount to 101 to 102 per cent., this being due to the hydration of the fatty acids. The report is made out in the following manner:—

	Per cent.
Fatty acids .. .. .	64.80
Combined alkali (soda) .. .. .	8.60
Silica .. .. .	0.00
Free or caustic alkali .. .. .	0.01
Sodium chloride .. .. .	0.40
„ sulphate .. .. .	0.14
„ carbonate .. .. .	0.00
Insoluble matter .. .. .	0.70
Unsaponifiable oil .. .. .	0.00
Water .. .. .	26.50
	101.15

This is an actual analysis of Castile soap, and shows the average composition of soaps of this class. The fatty acid varies in commercial yellow soap from 50 to 70 per cent. We have met with samples of B.P. *sapo durus* showing as much as 83 per cent. of fatty acid, but these are never seen outside pharmaceutical circles. The combined alkali varies from 8 to 10 per cent., and the water from 20 to 45 per cent. Occasionally the figure for water rises as high as 50 per cent., but this is only met with in silicated soaps, the silica being added to harden the soap and to enable it to take up the maximum quantity of water.

#### THE AUTHORITY OF THE PHARMACOPEIA,

IN regard to preparations which it prescribes, is getting fairly well established, but we hope it does not extend so far as the Sheffield stipendiary magistrate seems now to assume. Some years ago that authority decided that when tincture of opium was asked for, any tincture of opium might be supplied. Unless the preparation of the British Pharmacopœia was expressly asked for, he held that a vendor was not bound to supply a tincture of that strength. The case went on appeal to the Queen's Bench Division of the High Court, and Lord Chief Justice Coleridge and Mr. Justice A. L. Smith, regretting that the case for the respondent was not argued, found the decision of the magistrate wrong, on the ground that the evidence before him had proved that the term tincture of opium was well understood in the trade to refer to the B.P. preparation. The Sheffield magistrate appears to have now gone to the other extreme in his obedience to the ruling of the High Court. In one of the *sal volatile* cases which he has just decided it was proved that the defendant had labelled the article "*Sal Volatile P.L.*" We do not say that this was a sufficient explanation, and the analyst said the sample did



not correspond with either the P.L. or the P.B. product; but these considerations did not affect the magistrate's decision. He said the case decided in the Queen's Bench "seemed to point to the opinion that when there was a recipe in the British Pharmacopœia, that recipe had the monopoly over all other recipes, and though in accordance with other Pharmacopœias, the British Pharmacopœia must overrule them and supersede them, and the chemist must sell by that. That was the view he felt bound to take, against his own ideas." If he meant that it is absolutely illegal to sell an article as prescribed in a previous Pharmacopœia, with the full knowledge of the purchaser, when a new Pharmacopœia has modified the formula, we cannot help thinking that his ideas on the subject are sounder than his law.

### COMMENTARY.

MR. GLADSTONE opened the new residential college at Guy's Hospital on Wednesday, and in the course of an interesting speech said he could not help wishing that botany formed a recognised education, because not only was it in itself a most beautiful and interesting study, exercising the mind without fatiguing it, and stimulating the imagination without leading it astray, but it led to a careful observation of nature, and to a habit of noticing the qualities of plants which were so remarkable and so powerful in their healing capacity. He also spoke of the large fortunes which are now made in the medical profession, and was rejoiced to think that the day had come when the medical man who spent his talents and strength in the performance of his duty was, as in other professions, able to make competent and even large provision for his family. He contemplated with singular satisfaction the independence of the profession. It did not rely upon endowments. There was, indeed, no great profession which had so moderately and modestly dipped its hand into the public purse. It was eminently self-supporting, and this did much to maintain its honour and independence, and enabled it to pursue its stately march, to form its own convictions, to act on its own principles, without fear or favour, for the general benefit of mankind.

THE PILL MILL.—The *Daily Telegraph* makes our recent competition the basis of an editorial article, in the course of which the opinion is expressed that the real pith of the question lies in the fact that we are rapidly becoming a drug-taking nation, given to dosing ourselves with what are greatly mistaken as "short cuts" to health. What fresh fruit, vegetables, and exercise ought to do, what gentle tolerance and temperance ought to be able to effect, we throw overboard, and, as is evidenced by the statistics quoted, rush at a pill sooner than adopt a rule of life. There are people who think that day veritably lost wherein they have not swallowed some form of tonic, or a pill or two of some sort. They attach vast importance to the exact hour of administration, and, as a rule, carry their little nostrums about with them in tiny vials. Their best friend is generally alluded to as "my old enemy," the gout, or whatever the special disease may be, real or imaginary—and it is very often a purely imaginative group of ailments that is complained of—and these are your confirmed pill and drug consumers. It is such people, we are informed, who are at the mercy of any prospectus or bold advertisement that touches on matters medical. They literally revel in descriptions of "symptoms," and exclaim with joy, "Yes! I've got that," "Dear me! exactly how I feel in the morning"; and then, with a noble faith worthy of a better cause, proceed literally to engulf large quantities of the "new elixir," or the "youth-giving globules," or the "prime of life pill."

### Trade Notes.

MESSRS. G. VOGT & Co., of 19 Laurence Pountney Lane, E.C., have greatly enlarged their monthly price list, in which they quote essential oils, insect powder, perfumes and chemicals in original packages and large lots.

MESSRS. BURROUGHS, WELLCOME & Co. inform us that they have a few copies of the first edition of Remington's Pharmacy left and that they will sell these to pharmacists at 13s., the publisher's price being 21s.

MESSRS. COLTHURST & HARDING have purchased from the Millwall Lead Company the paint, colour, and varnish business (including the stock) which has for the past 100 years been conducted by Messrs. Pontifex and Wood, and will carry it on at their works at Millwall.

HENRY LAMPLOUGH (LIMITED) have prepared for distribution amongst retailers a handsome show card, showing "infancy to age" in both sexes as users of Pyretic saline. They have also beautiful "Glacier" transparencies of the same character, printed by McCaw, Stevenson & Orr (Limited), of Belfast and London.

MR. A. DE ST. DALMAS, Leicester, says that some of his customers have got the impression that the Board of Trade regulations require that plaster of American manufacture only is to be supplied for emigrant ships. He sends us a copy of a letter received from the Board of Trade, and dated March 15, 1890, stating that in the regulations referred to no particular kind of plaster is named.

PEPTONISED FOODS.—In an announcement in another part of this issue, Messrs. Mottershead & Co., of Manchester, state that they are now putting up Benger's peptonised beef and chicken jellies in clear glass jars instead of tins. This change is decidedly advantageous to the attractions of the preparations, and as the jellies are highly nutritious and assimilated with rapidity, as well as pleasant to taste, their popularity is likely to be enhanced by the change.

SOLUBLE "SANITAS" OIL.—This is a new preparation which the Sanitas Company (Limited) have just brought out. They tell us that it is practically non-inflammable, and we find that when added to water in any proportion, a perfect emulsion is formed. As the preparation is possessed of undoubted antiseptic power and is a powerful deodorant, it is an article which can be put forward with confidence at this house cleaning season. We notice from the various enclosures which we receive with this company's letters, that they have lately developed strongly in the artistic literature line.

FULLER'S EARTH UNION (LIMITED).—To acquire and consolidate the fuller's earth works in Redhill, Surrey, and Bath, Somerset. The capital is 105,125*l.* in 105,000 ordinary shares of 1*l.* each and 125 founders' shares of 1*l.* each. It is stated that the total present output of the works acquired is at the rate of nearly 12,000 tons per annum, and that the present average price is 2*l.* 1*s.* 11*d.* per ton. The purchase price is fixed at 95,000*l.*, payable as to 35,000*l.* in fully-paid ordinary shares, and as to the balance in cash. The directors will receive no remuneration and the founders' shares no dividend in any year until a dividend at the rate of 8 per cent. has been paid for that year on the ordinary shares.

MR. G. W. NIBLETT, of 26 Rainbow Street, Southampton Street, Camberwell, thinks the reference to him in our notice of Messrs. Hearon & Co.'s laboratory last week does not do fair justice to his inventive skill. We said: "The pill-coater in the sketch was made, according to the firm's suggestion, by Niblett, who has since improved upon it slightly, and has patented it." Mr. Niblett says that Messrs. Hearon and Co. sanctioned the following statement: "They intimated to him that they required a machine to produce an oscillating motion. The particular kind of motion desired, they illustrated by the movements they gave to a hand pill-coater. The mechanical combination by which the hand motion was successfully reproduced was worked out entirely by him. The machine was at once patented by him, and no structural alterations have since been made."



## CHEMICAL SOCIETY.

THE anniversary meeting of this society was held on Thursday afternoon at 4 o'clock. The president (Dr. Russell, of St. Bartholomew's Hospital) occupied the chair, and delivered an address. Having shown that the society, in spite of deaths and removals, on account of non-payment of fees, is on the increase, he referred to the condition of the library, which contains nearly 12,000 volumes, and said that there could be no better memorial of the jubilee of the Society (to be celebrated next year) than a general index of the Journals covering the whole of the volumes. Having also spoken of the condition of the Journal, and a proposal to increase its usefulness by paying more attention to analytical chemistry, he proceeded to compliment Dr. Perkins and Professor Thorpe, the recipients of the Royal and Davy medals, on the honour which had been paid to them by the Royal Society. Speaking of the change of the hour of meeting, he said it was to Mr. Crookes that the Society owed the debt of having raised the anniversary from a mere business meeting to one of special interest. The Council, recognising the fitness of the change, had resolved to hold the meeting in future in the afternoon, and to have something of a social character in the evening, thereby, probably, bringing more country members to it. He then spoke of the proposed exhibition, and finally came to the special subject of his address,

## THE TEACHING OF CHEMISTRY.

This had reference mainly to chemistry as a subject of medical studies. There were two ways in which it might be regarded, first as a subject for mental training, and also as bearing directly upon the practice of medicine. Under the first heading he spoke of the work which had been done by the Chemical Committee of the British Association, and referred in complimentary terms to the report of that committee. It was an interesting part of the address in which Dr. Russell spoke of the Science and Art Department. For many years he has been one of the examiners in chemistry for this Department, and it was not unnatural to hear him say that good work had been done in science, and especially in chemistry, through the South Kensington scheme. In chemistry alone there were during the past year 30,000 pupils, 25,400 of whom sent in papers; and, as an indication of what the work really meant, he told the meeting, amidst laughter, that  $2\frac{1}{2}$  cwt. of solid substance was distributed amongst the elementary pupils for the last practical examination. Coming to the question as to how chemistry is taught in schools, he reminded the audience that this was a comparatively recent subject, and it was scarcely to be expected that teachers, seeing what little encouragement and the like they had had, could be expected to take so much trouble with it as they did with classical subjects. But he emphasised the importance of chemistry as a subject for mental training, referring in complimentary terms to the scheme drawn up by Professor Armstrong. Addressing himself to the question, Is it necessary that chemistry should be a subject of medical study? Dr. Russell replied in the negative. Chemistry, he maintained, was really the basis of the action of medicines, for the action of medicines was really due to chemical change; therefore it might be thought that chemistry ought to be a fundamental subject of medical study. He did not deny this, but what he maintained was that the student should come to the medical schools with a thorough knowledge of the elementary principles of chemistry. In short, it should be an obligatory subject of the medical Preliminary examination. The time for medical study was brief, and must be devoted to the more important subjects, but it was impossible to do away with chemistry. It was a sound training. A knowledge of its principles would carry the student on for a time, until he came to study those physiological problems which were directly associated with chemistry. In the first instance the teaching should not be of a technical character, and he thought that the examination should be both written and oral. In regard to demanding that the student should state where he had obtained his knowledge, he advocated that he (the student) should

submit a certificate from some well-conducted and competent school. This knowledge was getting to be a valuable aid to examiners, and he regretted that the medical colleges had ceased to demand it of medical students, so far as chemistry was concerned. Later on in his career the student should again take up chemistry in association with physiology. This necessarily would be more technical, and would show the applications of the science to other subjects; in fact, what he desired was that the physiologist and the chemist should work together more than they had ever done before, and he appealed to all interested to discuss the matter in its relation to medical students.

On the motion of Sir FREDERICK ABEL, seconded by Professor EMERSON REYNOLDS, a vote of thanks was accorded to the President for his address, and he was requested to allow it to be printed. Professor Reynolds created some amusement by telling of a "crammer" whom he knew whose laboratory consisted of six test-tubes in his bedroom, and with six demonstrations his students succeeded in passing the examination portals.

Mr. LASCELLS drew the sympathy of the meeting by appealing to the Council to effect some alteration in the manner of electing persons to the fellowship of the Society. He said that the regulations ought to be far more strict than they were, and that the fellowship was losing its value by being bestowed on persons who were really unqualified.

The motion was carried unanimously, and the PRESIDENT replied.

## THE TREASURER'S REPORT.

Professor THORPE then submitted his financial statement. During the year ending March 20, 1890, the sum of 3,637*l.* was received in subscriptions, 340*l.* 11*s.* 5*d.* as interest, and from all other sources 397*l.* 12*s.*, making, with the balance from the previous year, a total of 6,208*l.* 13*s.* 9*d.* The bulk of the expenditure, amounting to 3,478*l.* 18*s.* 5*d.*, was on account of the Journal, which cost the Society 2,310*l.* 18*s.* 2*d.*, the editor's salary having been increased during the year by 50*l.* The expenditure on account of the library was 420*l.* 8*s.* 11*d.*, and the remaining expenses were of the usual character. During the year, 530*l.* had been invested in Metropolitan Board of Works Stock, the total investments of the Society now amounting to 12,954*l.* 2*s.* 7*d.*, and this was the whole of their assets. The treasurer also gave an account of the Research Fund, which is in a satisfactory state.

On the motion of Dr. HUGO MULLER, seconded by Professor DUNSTAN, Professor Thorpe was thanked for his services during the year.

Then followed votes of thanks to the directors, officers, editors, and librarian, after which a poll was taken for the appointment of office-bearers for the ensuing year, the gentlemen selected being those whom we have already named.

## THE FIRST ANNUAL DINNER.

After an interval of about an hour and a half, the members again assembled, this time in the Whitehall Rooms of the Hôtel Métropole, where Dr. Russell received them, and several of the most eminent men of science joined them. When the company sat down at 7.30 P.M. there were on the right of the President Sir J. Stokes, P.R.S., Sir H. E. Roscoe, Sir O. Roberts, Drs. Müller and Foster, M. M. Carteighe (President Pharmaceutical Society of Great Britain). On the left were Sir Lowthian Bell (representing the Institute of Civil Engineers and the Society of Chemical Industry), Sir F. A. Abel, Dr. James Bell, of Somerset House; Professor J. Dewar, Sir F. Bramwell (Sec R.I.), Dr. J. H. Gladstone, &c. Amongst the company were Professors Attfield and Dunstan, Messrs. A. H. Allen, Crookes, R. H. Davies, C. Ekin, G. Bult Francis, Walter Hills, Walter Ince, Ph.D., Edward Matthey, W. A. H. Naylor, &c. Grace was then said by the Rev. Henry White, chaplain to the Speaker, and between that and the grace after meat there was an excellent dinner. The royal toasts having been duly honoured, Dr. W. J. Russell rose to propose "The Chemical Society," and, in doing so, made a characteristic speech. In its old age, the Chemical Society, he said, was becoming frivolous, a remark which brought a loud "hear, hear," which there was no mistaking came from Mr. Carteighe. This was the first time it had given a party. He then proceeded to



review the history of the Society from its origin in 1841, when Mr. Warrington, of the Apothecaries' Hall, and twenty-four others had met and were unanimous about the formation of a society for the encouragement of chemical research. One of the original twenty-five (Sir W. Groves) still lived, and of the seventy-seven original members, six were still on the roll. Professor Thomas Graham was the first president, and the Transactions of the Society from 1841 to 1847 were recorded in three volumes of memoirs. In the first of these was the paper by Dr. Clark, recording his experiments with his soap solution for determining the hardness of water. The president's remark here, that Dr. Clark promised further details at a future meeting, brought a laugh, for chemists are still working at these "further details." Then he went on to speak of the manner in which the memoirs were got up, mentioning that Dr. J. H. Gilbert was the translator of the foreign papers, and indulging in reminiscences of Hoffmann's work on aniline and researches of Dr. J. H. Gladstone and others on gunpowder—a topical subject now. From this he proceeded to speak of the origin of the Quarterly Journal, Sir F. Abel's papers in it on Trafalgar Square water and mineral waters generally. In the succeeding volumes the investigations on coal tar by Mansfield were prominent, and the Journal continued to increase in usefulness until in 1860 it was decided to make it a monthly. Meanwhile chemical research had taken a firm hold and progressed. Beginning at the Royal College of Chemistry under Hoffmann, it was fostered at various institutions up to the Research Laboratory of the Pharmaceutical Society. Organic analysis was briefly referred to, and finally Dr. Russell said that the Chemical Society was deserving of all support, and he asked the company to toast its further prosperity. This was done heartily, although the company was sitting. Then Sir F. Abel proposed "Kindred Societies" in a felicitous speech, in which he spoke of the work done by the Royal Institution, and coupled with it the names of Sir Gabriel Stokes, M.P., F.R.S., and Sir I. Lowthian Bell, M.P., P.S.C.I., who replied. Professor Michael Foster, in a humorous speech, proposed "The Visitors," Sir F. Bramwell and Mr. Thistleton Dyer replying; and then Sir H. Roseoe submitted "The President," which was honored to the fullest. On the whole, the dinner was a great success. It was a social gathering, as the president said in the afternoon, but a little music would not have been amiss.

#### TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, at any time within one month of the date of this journal, give notice in duplicate, at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." All communications to be addressed to H. Reader Lusk, Esq., Comptroller General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

*From the "Trade Marks Journal," March 19, 1890.*

Various Oriental designs showing a monarch on throne with attendants grouped around; also recumbent female figure, knights in armour, and sketch representing bird's-eye view of factory; for chemical substances, and partly raw and prepared vegetable, animal, and mineral substances. By the Actien-Gesellschaft für Anilin-Fabrikation, an der Treptower Brücke, Berlin. 93,941, 93,942, 93,953, 93,954, 93,957, 93,958, 93,969.

"AZMIN"; for chemical substance used in manufactures. By Mondor Brothers, 17 Gracechurch Street, E.C. 94,432.

"ANTICUTA"; for a dressing for wounds of horses and cattle. By George Barker, 196 Walworth Road, London.

"SEIMA"; for an antiseptic. By Amies & Co. (Limited), Ashbourne, Derbyshire. 94,632.

"FJORD BRAND," with view of a Norwegian fjord; for chemical substances used in medicine and pharmacy.

By John Ware, 17 Queen Elizabeth's Walk, Lordship Park, London. 93,628.

"CAREL CROSS," and representation of a cross with steps; for a dry medicinal preparation for non-intoxicating beverage. By W. Wilson & Son, 34 English Street, Carlisle. 93,743.

"MAGDALENE OILS"; for human use in medicine and pharmacy. By James Barker, 46 South Street, Worthing, Sussex. 94,253.

"REIGO"; for a medicine for human use. By T. D. Sneath, 25 Mint Street, London. 94,956.

"BLACKWELL'S G.G.B. BRAND"; for French chalk, talc, hydrate, and other mineral substances. By G. G. Blackwell, West Fazakerley Street, Liverpool. 92,495.

"CARNISINE"; for a beef-tea or bouillon. By John Symes, trading as the Carnisine Company, 10 Copleston Road, Peckham, London. 94,636.

Sketch of statue of Sir Francis Drake; for mineral and aerated waters, &c. By John Gibbens and Eliza Gibbens, trading as E. Gibbens, 12 Kinterbury Street, Plymouth, 93,103.

"THE PICKWICK," with a sketch of Mr. Pickwick holding bottle; for mineral and aerated waters. By G. C. King, York Street, St. Paul's, Bristol.

Picture, showing two knights in armour with drawn swords, and various other wording; for perfumed soap, and perfumes and toilet articles. By Hodgson & Simpson, Calder Soap Works, Wakefield. 91,706, 91,708.

"WHAT'S WANTED" on label with sketch of crossed swords; for perfumery, including toilet articles. By D. C. Keeling & Co., Blundell Street, Liverpool. 94,148.

"BLONDINE"; for a liquid preparation for dyeing, bleaching, colouring, &c. By James Brodie, 41 Museum Street, London. 94,762.

*From the "Trade Marks Journal," March 26, 1890.*

Picturesque designs showing riders on horseback, and sketch of two elephants beneath a palm tree, and prize medals; for chemical substances used in manufactures, &c. By the Actien-Gesellschaft für Anilin-Fabrikation, an der Treptower Brücke, Berlin. 93,154, 93,961.

"DISTEMPERINE" and other wording, with sketch of two dogs fighting, on label; for a preparation for the cure of distemper in dogs. By R. R. Weed, Harpenden, near St. Albans. 94,684.

"DISTEMPER," with signature; for a medicine for dogs. By G. Easum, trading as Russell & Co., 53 Park Road, Crouch End, N. 94,811.

"SODATTA" and signature; for a medicine. By G. Easum, trading as Russell & Co., 53 Park Road, Crouch End, N. 94,810.

"PERIKARP"; for a medicine for influenza and catarrh. By G. Stater, 54 Snighill, Sheffield. 94,912.

"THE NEUTRALIZER" and other wording on shield; for a medicine. By J. E. Jones, 14 Bell Yard, Strand, London. 95,035.

"RAIZON"; for a medicine for scurf, &c., and for wounds, bruises, &c. By H. Keys, 4 Livery Street, Birmingham. 95,098.

Sketch of Dick Turpin, on his celebrated horse, leaping an overturned barrel; for turpentine. By W. & F. Walker, 4 Irwell Chambers, Fazakerley Street, Liverpool. 89,410.

"BLACKWELL'S G.G.B. BRAND"; for French chalk, talc, soapstone, and other mineral substances. By G. G. Blackwell, 26 Irwell Chambers, West Fazakerley Street, Liverpool. 92,495.

"G. F. K." in monogram on shield, and other wording, and name; for eau de cologne. By G. F. Kneen, 141 Anerley Road, London, S.E. 93,392.

"LEONATIS HAIR WASH," and other wording, on label; for a hair wash. By H. S. Davis, 4 Stratford Road, Kensington, W. 93,992.



## Trade Report.

**Notice to Retail Buyers:**—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., March 27.

OUR market remains exceedingly quiet, and it is likely to remain so until after the approaching holidays. The principal changes this week can be summed up in a few words. Among chemicals we have to report a further advance of citric and tartaric acids, and also an upward movement in quinine. Acetic acid is exceedingly scarce, and it looks as if prices must rule higher in future. Cream of tartar, on the other hand, has fallen the victim of "bear" speculation, and is quoted considerably cheaper. Sulphate of copper is also unsteady and lower for future delivery, and prices of cocaine are also reported on the decline. Antimony has likewise given way, but the manufacturers of sulphate of magnesia have advanced their quotations. In drugs there are few changes. The cinchona sales here went off badly, and some decline was established, but this seems to have been recovered at to-day's Amsterdam auctions. Crude camphor was cheaper early in the week, but is now again firmer and advancing. Insect flowers are reported lower, and there has been a sudden and very strong decline in the price of worm-seed, and consequently of santonine. Higher prices have been paid for jalap, and ipecacuanha is also reported dearer. For nutmeg-oil an advance has also been paid. Referring to outside articles we again report that gambier and shellac are lower in price, cutch firm and advancing, turmeric and isinglass also generally dearer, and gum olibanum firmly held. Gum arabic went off fairly well at to-day's auctions, Ghatti and Kurrachee amrad being somewhat dearer. Benzol also appears to be turning the corner again. Among oils, cotton-seed is somewhat better in price, but linseed and Mogadore olive can be quoted lower. Bicarbonate and caustic soda higher, soda ash rather easier. Among spices, pimento and new Jamaica ginger are selling very well, but Zanzibar cloves, black and white pepper, and pearl sago are lower in price.

**THE COMMERCIAL SALE-ROOMS BENEVOLENT FUND.**—The annual meeting of the Fund Committee took place a few days ago, Mr. John Rains presiding. The accounts for the year ending February 28 show a slight falling off in the receipts over last year, while, on the other hand, the expenditure has been slightly higher. The amount invested exceeds 6,000*l.*, and an effort is being made to bring this up to 10,000*l.* In the place of two members of the committee recently deceased, Messrs. Henry Price and S. J. Pitt were elected.

**SHORT WEIGHT ON SHELLAC.**—At the shellac auctions on Tuesday, Mr. Rennison (John Kenyon & Sons) complained that a parcel of 25 cases of button lac purchased by him for delivery, when weighed in gross upon its arrival in London showed a deficiency of  $1\frac{1}{2}$  cwt. upon the weight invoiced from Calcutta, which was found to be owing to the incorrectness of the Calcutta tare. He had written a letter to the importers complaining of this loss, and they in turn had communicated with their correspondents in Calcutta, but so far he had obtained no redress. He would like to know what remedy he had against such a loss. A confused conversation followed Mr. Rennison's statement, several members of the trade heing on their legs at the same time; but after awhile, Mr. Ziegele (Albisser, Ziegele & Co.) got a hearing, and proposed that in future 5 cases out of every 100 should be tared, and their tare taken as the average tare of the parcel. This proposition having been seconded, Mr. Peall (P. Roy & Co.) proposed that in future shellac should not be sold on

"unworked" terms, but as "worked" only, and that the trade should combine to boycott all unworked lac. This suggestion found a seconder in Mr. Manser (Hy. Manser & Co.), but Mr. Dalton objected that the adoption of the last proposal would destroy our large and growing shellac trade with the States, as American buyers bought only unworked lac; and after some further desultory conversation Mr. A. Colman proposed as an amendment that as the trade were evidently all at sixes and sevens, buyers should confer together and place the result of their deliberations before the room at next week's auctions. This was seconded by Mr. Hicks (Johnson, Rolls & Co.), but negatived by a large majority, Mr. Ziegele's proposal being subsequently carried by the unanimous vote of the trade. Mr. Bluhm (A. Faber & Co.), as a parting shot, suggested that it would be best not to come to any agreement until Mr. Figgis returned from the Riviera, as that gentleman always walked through all agreements made without his assistance. The laughter excited by this expression of opinion brought the matter to a close.

**THE NEXT LONDON CINCHONA SALES** will be held on Tuesday, April 22. This date was agreed upon at to-day's auctions.

**THE TYNE CHEMICAL TRADE.**—A heavy American demand for all classes of chemicals produced on the Tyne, aided by the disturbances caused by the coal strike and the Liverpool dock strike, has greatly animated the Newcastle trade, and the change is very welcome, inasmuch as the past winter has been the dullest regarding American indentures experienced for many years. On Friday last the unusual sight of a large steamer, laden wholly with chemical products, made and consigned by Tyne houses, sailing direct from the north-east river to America was witnessed. Two other large vessels are loading, mostly with chemicals for the States. It is also said that the Jarrow Chemical Company have received for their large works at Tyne Dock the contract for a special chemical product that will keep the works fully occupied for a long time. Cables from Pittsburgh, Pennsylvania, state that that important glass centre has suddenly found itself short of the necessary British chemicals, and many of the glass-works will probably be compelled to shut down. The price of chemicals has within the last ten days advanced 100 per cent. at Pittsburgh, the result of which will doubtless be to drive many of the glass-houses into bankruptcy.

**CINCHONA-GROWING IN JAVA.**—We have just received from the secretary of the Agricultural Society of Soekaboemi (Java), whose statistics on the production of Java cinchona we quoted at length last year, a statistical abstract giving full details of the estimates for 1890. It appears that there are now 103 cinchona plantations in Java, of which 78 supplied the information asked for by the secretary. The total area of these plantations is about 160,000 bouws, or 280,458 acres, but part of this lies fallow, and another part is planted with cinchona in addition to other cultures. The total surface under cinchona (private and Government) is estimated at 31,552 acres, containing about 40,000,000 cinchona trees. The actual crop for 1889 was about 15 per cent. in excess of the estimates, but the average quality of the bark was slightly poorer than anticipated. The figures concerning the 1889 crop and the estimated yield for 1890 are as follows:—

	Estimate 1889	Actual yield 1889	Estimate 1890
Crop in kilos .. ..	2,055,900	2,386,935	2,625,250
Average per cent. sulph. quinine	4.16	4.05	4.07
Total weight quinine, kilos. ..	85,569	96,733	105,899
" " " oz. ..	3,019,000	3,416,000	3,775,000*

\* Or about 60 per cent. of the estimated requirements of the world.

There are five estates in Java which have each more than 1,000,000 trees in the open, and one of these harvests exclusively pharmaceutical barks. The largest estimated



yield for 1890 on any single estate is 150,000 kilos. of bark, and the highest estimate of the average percentage of quinine in the bark is  $6\frac{1}{2}$  per cent. Among the 78 estates which supplied information there are no less than 27 which have never yet given any harvest, but some of these will yield their first crop this season, and several are very large estates, whose produce, when once they begin to harvest, will tell heavily upon the total exports. Only one estate, so far as can be gathered from the returns, was abandoned last year, and that must have been a curiously-managed one, for although in 1889 it yielded about 216,000 kilos. bark, of an average of  $5\frac{1}{2}$  per cent., it was subsequently sold by auction for the total sum of 1s. 8d.!

**ACIDS.**—*Citric* is firm and slightly dearer, 1s.  $3\frac{3}{4}$ d. being the nearest price on the spot. *Oxalic* scarce. 1s.  $3\frac{1}{4}$ d., perhaps 1s.  $3\frac{3}{4}$ d.; and *Sal acetos* about  $5\frac{1}{4}$ d., although there is very little business doing in the latter, *Tartaric* is rather dearer on the week, but closes quiet with a dull market: English spot, 1s.  $3\frac{1}{4}$ d. to 1s. 4d.; foreign, 1s.  $2\frac{3}{4}$ d. to 1s. 3d.; and for forward delivery, 1s.  $3\frac{1}{4}$ d. to 1s.  $3\frac{3}{4}$ d.

**ACID (ACETIC).**—There is very little acetic acid available at present, and it is thought that before long there will be a further advance in the quotations. At present *Glacial* acetic acid is quoted up to 62l. per ton. The scarcity and advance have been brought about, in addition to the combination among the manufacturers, by the large consumption of acetic ether for the manufacture of smokeless powder.

**ACID (CARBOLIC).**—The market is somewhat sluggish, and prices cannot now be quoted higher than 11 $\frac{1}{2}$ d. to 1s. per lb. for 34–35° crystals, and 1s. 5d. per gallon for liquid acid.

**ALOES.**—The last Cape steamer has not brought any supplies.

**AMMONIA SALTS.**—*Carbonate* quiet at  $3\frac{1}{2}$ d. *Sulphate* sluggish and a shade easier, Beckton terms, 11l. 12s. 6d.; London, 24 per cent. grey, and Hull, 11l. 15s.; Leith, 11l. 13s. 9d. to 11l. 15s. *Sal ammoniac* unchanged, 37s.; and 35s. for first and second quality crystals.

**ANTIMONY.**—The market for *Crude Japanese* antimony is unsettled, and quotations are entirely nominal. On the spot 48l. is nominally quoted, but the tendency is decidedly easier. *Regulus* 70l. nearest price.

**ARSENIC.**—Steady of sale, 13s. 9d. to 14s. for white powder, landed.

**BENZOL.**—The prices show a very slight recovery, and there are now no further sellers at the lowest rates recently touched. It is thought that a good many buyers have purchased large quantities for speculation, and the outlook is said to be in favour of an early rise again: 90-per-cent., 3s.  $4\frac{1}{2}$ d. to 3s. 5d.; 50-per-cent., 2s.  $7\frac{1}{2}$ d.

**BORAX.**—The importers' prices are nominally unchanged at 30l., but there is no difficulty in buying second-hand at 28l.

**CAMPHOR (RAW).**—The *Denbighshire*, of which we mentioned the arrival in our last report, has brought 636 tubs of camphor from Kobé, but it is generally rumoured that this is the last great parcel which can be expected for some time, and that very little, if any, camphor is now afloat for London. The consignment referred to is in five or six bands, and part of it is already on its way to the refineries. Early this week the market was decidedly easier, and there were sellers, but no buyers, at 9l. 15s. c.i.f. terms, April-May shipment. Since that time, however, a decided change has come over the attitude of operators, and we have heard of a sale of 200 piculs Japan camphor (April shipment) at 9l. 17s. 6d. c.i.f., while to-day's news from Japan states that the shippers there demand 10l. 10s. c.i.f. for further transactions.

**CINCHONA.**—The receipts from all quarters since our last report have been 1,346 packages. At Tuesday's auctions an exceedingly small supply of bark was offered, several owners having withdrawn the parcels previously declared by them in the face of the general dullness of the market, and the proximity of the abnormally heavy Amsterdam auctions.

The result of our sales, therefore, can scarcely be regarded as affording a fair test of the market, although it must be acknowledged that the tendency was decidedly easier. The catalogues included:—

	Packages	Packages
Ceylon bark .. ..	544 of which	233 were sold
East Indian bark ..	445 ..	251 ..
Java bark .. ..	172 ..	172 ..
South American bark	204 ..	83 ..
Total .. ..	1 445 ..	811 ..

From the beginning the prices were in buyers' favour, and several lots sold at rates which had been refused for them at previous auctions, or even a fraction below these figures. The assortment offered was rather poor as regards quality. The unit may be called 1 $\frac{1}{2}$ d. to 1 $\frac{3}{4}$ d. per lb. The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	37,550
" the French, Italian, and American works ..	31,843
Messrs. Howards & Sons .. ..	27,672
Agents for the Brunswick factory .. ..	27,474
" the Auerbach factory .. ..	20,710
" the Frankfort o/M. and Stuttgart works ..	16,920
Sundry druggists .. ..	19,440
Total quantity sold .. ..	181,609
Bought in or withdrawn .. ..	128,090
Total amount of bark catalogued .. ..	309,699

It should be well understood that the mere weight of bark purchased affords no guide whatever to the quinine yield represented by it, firms who buy a small quantity of bark by weight frequently taking the richest lots; and *vice versa*. An analysis of the catalogues gives the following prices for sound bark:—

**CEYLON BARK.**—*Original*: Red varieties, good pale to bright, partly woody shavings,  $3\frac{1}{2}$ d.; chips, small branchy to fair bold, mixed, rather woody, 2d. to  $2\frac{1}{2}$ d.; bold bright ditto,  $2\frac{1}{2}$ d.; root, 3d. per lb. Yellow stem chips (Calisaya), rather dull colour, 6d.; grey chips, bold and bright, but very woody,  $2\frac{1}{2}$ d.; small to bright branchy,  $3\frac{1}{2}$ d. to  $4\frac{1}{2}$ d.; dull dusty root, 3d. per lb. Red and yellow mixed spoke shavings, 4d.; ditto root,  $7\frac{1}{2}$ d. per lb. *Renewed*: Fair to good branchy chips, 3d. to  $4\frac{1}{2}$ d.; fine bright, but dusty, shavings, 7d. to  $7\frac{1}{2}$ d. per lb. Yellow shavings, dull and small, 4d.; grey chips mixed with shavings, low and dusty,  $3\frac{1}{2}$ d. per lb.

**EAST INDIAN BARK.**—*Original*: Red chips, good bright quilly, rather mixed colour, 2d. to  $2\frac{1}{2}$ d.; grey chips, good strong silvery and branchy, 7d.; ditto shavings, 11d. per lb. *Renewed*: Red chips, bold, but rather dull,  $2\frac{1}{2}$ d. to 3d.; grey spoke shavings, small to bold, bright and branchy, 5d. to 6d.; a fine lot, 8 $\frac{1}{2}$ d.; fair branchy chips, 5d. to  $5\frac{1}{2}$ d. per lb.

**JAVA BARK.**—*Succirubra*: Good bright but very dusty chips, 3d. to  $3\frac{1}{2}$ d.; good stout, but damaged, druggists' quill,  $3\frac{1}{2}$ d. to 5d. *Ledger*: Long, partly weak, silvery mixed druggists' quill,  $7\frac{1}{2}$ d.; short ditto,  $6\frac{1}{2}$ d. (all damaged); dull and small to good strong branchy chips,  $4\frac{1}{2}$ d. to 6d.; dull-looking and dusty root from 7d. to 9 $\frac{1}{2}$ d. per lb.

**SOUTH AMERICAN BARK.**—Cultivated *Calisaya* was not offered to-day. Of 91 packages old *Pitayo* 9 sold; dull and small at  $3\frac{1}{2}$ d. per lb. Of 40 packages *New Granada* 12 sold at  $2\frac{1}{2}$ d. to 4d. per lb., and of 153 packages *Cuprea* 68 (imported in 1882) sold at  $5\frac{1}{2}$ d. per lb.

**COCAINE.**—The news from abroad is to the effect that much lower prices are accepted, but the English and the principal foreign makers have made no change in their quotations.

**COCOA BUTTER.**—The periodical auctions on Tuesday will include 25 tons of *Cadbury's* cocoa butter in 2-cwt. cases, and 5 cases of the same brand in 3-oz. tablets.

**COPPER (SULPHATE).**—On the spot 25l. 10s. is about the nearest price for 98 per cent. but deliveries are taking place very slowly; for forward, especially distant delivery, much easier rates are quoted, and the prices range from 24l. 10s. to 23l. 10s., April-May; 21l. to 20l. 10s., for July-September; and down to 18l. as far as October next.

**CREAM OF TARTAR.**—Prices are falling away again, and



best white crystals can be had at about 103s. 6d. to-day; to arrive, the prices are slightly above the spot quotation, and it is claimed that the value of raw material would warrant a much higher price for cream, and that the decline is owing mainly, if not altogether, to "bear" speculation.

**CUTCH** remains very firm, with an exceedingly good demand for the better grades. We hear of further sales of *Star B* cutch, March-April shipment, at 31s. 6d. to 32s. The Liverpool market for fine brands of cutch remains very firm. The shipments from Rangoon remain very small, the figures for the periods from January 1 to March 15 being—1890, 2,420 tons; 1889, 6,270 tons; 1888, 6,530 tons.

**EPSOM SALTS**.—The manufacturers have raised their quotations up to about 100s. per ton.

**GALLS**.—The arrivals have been rather heavy recently, and the market is consequently somewhat depressed. The nearest spot value for usual shape *China* galls is 69s. per cwt., and 60s. c.i.f. terms is asked for plum-shaped galls for arrival.

**GAMBIER**.—*Block*, dull and rather easier, with sales reported at 27s. on the spot, and 27s. 3d. for April-May. At the drysaltery auctions 81 bags newly-imported *Cubes*, all damaged, sold at 35s. to 38s. per cwt.

**GLYCERINE**.—The manufacturers continue to quote 70l. for s.g. 1,260 double distilled, but second-hand holders aver that they cannot sell even at 67l. 10s.

**GUM ARABIC**.—To-day's auctions comprised a very heavy quantity of arabic gums, mostly of the East Indian varieties. The assortment, however, was by no means a very fine one, and the sales proceeded slowly, although not unsatisfactorily. *Bombay* gums were rather irregular, but generally lower, scented *Bombays*, especially, which have generally been held much above the market value. Fine *Aden* gums are rather scarce and inquired for, but the owners demand more money than the trade can afford. *Ghattis* sold well, and often at slightly improved prices. For *Egyptian Amrads* there was no demand whatever, although owners would have been prepared to take lower prices. *Kurrachee Amrads* sold at irregular rates, about 3s. to 4s. dearer for some varieties. The market for *Senegal* gums is very dull, and prices rule lower, say 82s. 6d. for *Bas du Fleuve*, and 75s. to 80s. for *Galam*. In Liverpool there is a good and steady demand for *Niger* gums of the better qualities, and also for *Brazilian*. Of *Aden* gums small sales were made at 66s. for fine selected drop; ordinary sorts, 27s. 6d. to 30s. per cwt. *Cape* gum brought from 59s. up to 67s. for fair to good ambery sorts; *Australian* ordinary glassy, dark and woody, 29s. 6d. to 32s. per cwt. The following were the prices for East Indian gums:—*Bombay Amrad*, common dark to good ambery, 30s. to 50s.; good ambery *Kurrachee*, 51s. to 56s.; fine, 60s. to 66s.; pale siftings, 19s. to 31s.; fair *Oomra*, 41s.; fair to good clean olibanum-scented *Aden*, 37s. to 40s.; *Ghatti*, common and dark to superior, 10s. to 74s. 6d.

**GUM ELEMI**.—Fine qualities remain exceedingly scarce, and the steamer just in from Manila has not brought any elemi at all.

**GUM GUAIACUM**.—A parcel of 63 packages has just been received. It comes to a rather bare market.

**GUM OLIBANUM**.—Holders are firmly disposed, and show no anxiety to sell. About 230 packages were sold at to-day's auctions, fair to fine pale *Bombay* drop at 39s. 6d. up to 50s. per cwt.; siftings at 10s. to 14s.; pickings and common *Aden* sorts at 13s. to 18s. per cwt.

**INSECT FLOWERS**.—The prices are coming down and lower rates have been quoted from Trieste during the last few days.

**IPECACUANHA**.—We understand that about 2d. per lb. advance is now asked by holders over the prices paid at the last auctions.

**IRON REDUCED BY HYDROGEN**.—The quotations have been very materially advanced lately.

**ISINGLASS**.—Only 361 packages were offered for sale at the periodical auctions on Tuesday. The bulk of this supply consisted of *Bombay* isinglass which sold somewhat irregularly: cake about 1d. to 1½d. lower, ordinary to good pale, at 5d. to

11d. per lb.; but all other varieties brought higher rates, especially leaf, for which 2d. to 3d. per lb. advance was obtained. Tongue sold at 10d. for low fat and red, up to 3s. 2d. per lb. for fine bright pale new, dark to fine pale pieked bladder pipe at 9½d. to 3s. 3d., ordinary red to fair pale leaf, 1s. 8d. to 2s. 5d. per lb. *Penang* leaf and tongue also dearer, the former at 1s. 11d. to 3s. 9d., while good tongue brought up to 1s. 9d. per lb. *Saigon* also dearer, ordinary mixed round leaf 2s. 9d. up to 6s. 1d. for fine long pale; *Brazilian* fair yellow Para lump up to 2s. 9d. per lb.

**JALAP**.—Our market is still advancing. We understand that 1s. 2d. per lb. was paid yesterday and has since been refused for fair heavy *Vera Cruz*. Reports from New York, dated 15th inst., say that there has been a very brisk demand there for export, about 3 tons being reported sold in that way. There is not much left in stock now. Telegrams from Mexico announce that there is no chance of any supplies of importance coming forward.

**JALAPINE**.—The rise in the value of the raw drug has compelled the resin-makers to gradually raise their quotations from the lowest point, viz. 22s., up to about 35s.

**MARSHMALLOW ROOT**.—The advance in the price of this article, to which we have recently called attention, still continues.

**OIL (CASTOR)**.—In Liverpool holders are firm, but business is limited in extent. Small transactions are reported from time to time in good *Calcutta* seconds at 3¼d., while first pressure French is held for 3½d. to 3¾d. per lb.

**OILS (ESSENTIAL)**.—*Star-anise*, dull and quiet; although we have not yet heard of any business below 6s. 1d., it is said that less would be taken for a large quantity. *Cassia*, selling in a small way at 3s. 6d. per lb. *Citronella* and *Lemongrass* without change. *Nutmeg* oil reported dearer, with sales up to 6d. per oz. for favourite brands. *Sandalwood* oil, 16s. per lb. *Menthol*, fairly steady; for arrival near at hand 7s. 9d. per lb. c.i.f. terms is asked, and it is said that there is but very little available. *American Peppermint* (H. G. H.), 10s. 9d. per lb.

**OIL (MYRBANE)**.—English makes are now quoted at 6¼d. to 7d. per lb.

**OILS (VARIOUS)**.—*Cocoanut* oil steady, fine Ceylon, on the spot, 25s. 3d., and for forward delivery distant 24s. 9d. (c.i.f.), good to fine Cochin from 28s. to 28s. 6d., and *Mauritius* 25s. 6d. per cwt. *Cotton-seed* oil: crude, on the spot, firmer at 19s. 9d.; refined ordinary qualities, 22s. to 22s. 3d. Hull, crude, naked, 18s. 7½d. to 18s. 4d.; refined, 20s. 4½d. The Liverpool market is also firmer and dearer, Liverpool refined, 22s. 6d. to 23s. 3d. *Ground-nut* oil is still at 31s. to 31s. 6d. per cwt. for fine quality in Liverpool. *Linseed* oil dull of sale, with sellers on the spot at 22s. 9d. Hull slightly easier, 22s. 3d. to 22s. 4½d.; Liverpool, 24s. 6d. *Olive* oil: quiet; Spanish, 41s. to 42s. *Mogadore* lower at 36s. to 36s. 6d. *Palm* oil is selling slowly at 24s. 6d. for fine Lagos, and 3d. more is now asked. The Liverpool market is firm with little offering, and business in Lagos oil on the spot at 22s. 9d. to 23s. *Petroleum*: flat, American, at 5½d. to 5¾d.; Russian, 5¼d. to 5½d. *Rape* oil: steady, brown 31s., and refined 32s. 6d.; refined Stettin oil at Liverpool, 35s. 6d. to 36s. *Turpentine* quiet at 30s. to 30s. 3d.

**OPIUM**.—Our market is almost stagnant, and quotations remain practically unchanged. Telegrams received from Smyrna yesterday reported an advance of 6d. per lb. there. The latest mail news which reaches us from Smyrna, date March 15, is to the effect that the summer sowings have been made under favourable auspices as regards the weather, and that sales had been made at falling prices. At the same time the decline, it is thought, is not likely to be a lasting one, as the new sowings are most likely to succumb to the extreme summer heat. During the week ending March 15, 214 baskets were sold in Smyrna, the bulk being for the Philadelphia morphia factory.

**POTASH SALTS**.—*Ashes*: Best Montreal potashes held at 22s. 3d. in Liverpool. *Pearlashes* nominal, 30s. 9d. *Bichromate* steady at 4d. per lb. *Chlorate*, we should think from 4¼d. to 5d. per lb. would buy, but some holders quote very much higher prices; forward delivery, 5¼d. *Yellow Prussiate*: English and foreign, 9¼d. German refined *Saltpetre*, 18s. 6d. to 18s. 9d.; Bengal, March-April shipment, dull at 16s. 3d.



**QUASSIA WOOD.**—Good logs are quoted at 6*l*. 5*s*. per ton.

**QUICKSILVER.**—The importer's price remains unchanged at 9*l*. 10*s* per bottle. Second-hand holders have fluctuated only slightly during the week, and are now sellers at 9*l*. 6*s*. The following figures refer to the imports and exports of the quicksilver during the last ten years, together with the variations in price during that period:—

	1880	1881	1882	1883	1884
Imports—bottles..	49,541	£6,261	45,921	54,520	59,970
Exports—bottles..	16,070	24,842	40,424	48,997	52,492
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Highest price ..	7 15 0	7 0 0	6 5 0	5 17 6	6 15 0
Lowest price ..	6 7 6	6 2 6	5 14 0	5 2 0	5 2 0

	1885	1886	1887	1888	1889
Imports—bottles..	55,153	58,966	61,212	73,770	97,664
Exports—bottles..	48,823	66,030	62,476	47,132	57,658
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Highest price ..	6 15 0	7 10 0	11 5 0	11 0 0	9 12 0
Lowest price ..	5 10 0	5 13 0	6 10 0	6 15 0	7 7 0

The total imports during the decade have therefore been 582,978 bottles, and the exports 464,994 bottles, while the mean price has been, say, 7*l*. Estimating the consumption in the United Kingdom at from 12,000 to 13,000 bottles annually, our stock at the end of 1889 would be about 7,000 bottles less than it was at the beginning of 1880.

**QUININE.**—Our market has improved somewhat, and we hear of transactions since our last report at 1*s*. 1*d*. up to 1*s*. 1½*d*. per oz. for about 60,000 oz. *B & S* and *Brunswick* in second hands. The latter price is to-day's closing quotation. Much has recently been made of the falling off in the imports of quinine into the United States. But the tide there has recently taken a turn. Says the *O. P. & D. Rep.* of the 12th inst.:—The surplus stock in this market was almost entirely wiped out during December and January by an extraordinary demand, such as is not likely to be seen again for many years to come. It was an opportunity for which holders of quinine had long waited with scarcely a prospect that it would ever come. Its legitimate results had hardly begun to be realised when they were entirely nullified by the receipts of enormous quantities of quinine from London. Within the six weeks ending March 8 nearly seven hundred thousand ounces of quinine arrived in New York from Europe, or a little less than one-third of the entire quantity received here during the year 1890.

**SHELLAC.**—The week under review opened with a somewhat larger business at the easier rates accepted by sellers, and about 1,500 cases *TN Orange* changed hands previous to the auctions at 75*s*. 6*d*. for May, 76*s*. to 76*s*. 6*d*. for July and August delivery. A sale of unworked *Garnet lac* (AC) at 71*s*. spot terms, was also reported. The auctions comprised

	Cases	Cases
Orange lac ..	675 of which	412 were sold
Button " ..	100 "	60 "
	775	472

The greater part of the *Orange lac* disposed of was declared "without reserve," and sold mostly at a decline of about 6*d*. per cwt., viz., worked and unworked ordinary to good reddish, 73*s*. to 75*s*.; dull and cakey unworked, 72*s*.; good pale lemon, 90*s*.; five cases fine pale G in double triangle at 105*s*. per cwt. *Button lac* realised 92*s*. to 98*s*. for good bright first to superior blood lac, and 75*s*. to 76*s*. for dark fourths. After the auctions the market became very flat, and at the end some business was done for August delivery at 6*d*. decline. During the latter part of the week the market has continued its downward course, and at to-day's call the following quotations were made:—

	Apr.	May	June	July	Aug.
Orange <i>TN</i> , sellers ..	74/	75/	300 nt	75/	75/6
" buyers ..	73/	74/	74/6	74/6	75/
Garnet AC, sellers ..	75/	74/	73/6	73/6	—
" buyers ..	72/	72/	71/	70/	—

No "calls" will be held from Wednesday, April 2, to April 9.

Calcutta reports, dated March 4, say that the holders generally expect a further rise in the market, and are very firm, "basing their hopes on the shortness of the sticklac crop and the high prices asked for raw materials."

**SODA SALTS.**—*Ash*, lower on the Tyne, and obtainable at 1½*d*.; London, 1½½*d*. *Bicarbonats* dearer, at 6*l*. 10*s*. to 6*l*. 15*s*. *Caustic* quite unsettled, and prices are nominal; 60 to 70 per cent. white, 10*l*. to 12*l*.; cream, 10*l*. 5*s*.; *Crystals* lower, at 57*s*. 6*d*. ex ship here, and 60*s*. landed. *Nitrate* quiet, at 7*s*. 10½*d*. up to 8*s*. 7½*d*., according to quality.

**SPICES.**—*Cassia Lignea*: dull of sale, old quills nominally 22*s*. 6*d*., but no business doing. At auction, 50 bales broken sold at 14*s*. 6*d*. per cwt. *Cassia buds*, unaltered, 44*s*. to 45*s*. per cwt. Of *Zanzibar Cloves*, business has been done for shipment, March to May, at 4½*d*., landed terms; and at auction, about 100 bales sold at 4½*d*. for good fair. *Amboina*, at 7½*d*. for fair quality. *Ginger*: New Jamaica is bringing high prices, medium to good quality, from 71*s*. 6*d*. up to 85*s*.; ordinary to low medium, 64*s*. to 69*s*.; hold Lima Cochín ginger, cut, sold at 51*s*. 6*d*. to 53*s*. 6*d*. *Mace*: Unchanged, ordinary dark to fair Penang, 2*s*. 6*d*. to 2*s*. 11*d*.; and wild Bombay, without reserve, at 5½*d*. to 9½*d*., according to quality. *Nutmegs*: hold Penang (76) 2*s*. 9*d*., West India, 2*s*. 5*d*. to 2*s*. 7*d*. *Black pepper*, lower, both on the spot and for arrival. At auction, dusty Atchin sold at 4½*d*.; dull to fair hold Singapore, 5½*d*. to 5½½*d*. *White pepper*, also easier all round; Siam, on the spot, 9½*d*.; Singapore, 9½*d*.; Penang, 7½*d*. to 7½*d*. *Pimento* brings full prices, ordinary to good, 2½*d*. to 3½*d*. *Pearl sago*, 6*d*. lower, fair to fine, 12*s*. to 14*s*. *Tapioca* steady; for Penang, fair to fine, 1½*d*. to 2½*d*.; pearl, 16*s*. to 17*s*. 6*d*.

**STICKLAC.**—Holders are very firm, and will not sell at less than 42*s*. 6*d*. per cwt. for fine *Siam* fairly free of wood.

**TEA.**—The trade generally is quiet, the Budget, Easter, approaching, and the hoat-race, all contributing in a greater or less degree to the prevailing dullness. Congous from 4½*d*. to 5*d*. are easier, showing ½*d*. to ¾*d*. per lb. decline, and the terminal market is correspondingly weak. Better grades, however, are unchanged, and teas from 5½*d*. to 7*d*. show still remarkable value, *Onfas* selling from 4*d*. to 6*d*. per lb. below the price at which they were valued on arrival. Newmakes are easy for the lower grades, but fine honeysuckle sort are scarce and wanted. Assams are firm all round, and there are none of the good liquoring broken and fannings at about 5½*d*., which were to be picked up here and there a week or two ago. Useful liquoring leaf tea can be bought 7*d*. to 7½*d*., but better grades show a very steady tone, and really fine teas, both broken and leaf, must be quoted distinctly dearer. Ceylons are steady at last week's prices to a trifle firmer, and a large trade is being done in the good liquoring teas now selling from 8½*d*. to 10*d*., these being about the only teas in which there is any business doing in the country. Though we shall, no doubt, have lowest grades easier, perhaps 1*d*. or 2*d*. per lb. lower, it is not likely that these good teas will go any cheaper, and they are worth using freely in blends.

**TURMERIC.**—The market remains very steady, with sales of *Benjal* up to 10*s*. per cwt. For a parcel of good bright split *Cochin* bulbs 8*s*. per cwt. has been paid.

**WAX (JAPAN).**—Dull and neglected at 45*s*. to 46*s*. per cwt.

**WORMSEED.**—The news has been received here this week from the European agents of the Central Asiau santolin works that prices had been reduced there very considerably for the seed as well as for santolin. The latter is now quoted at about 4*s*. per lb.

#### CHEMICALS IN THE NORTH OF ENGLAND.

THE BOOM IN CHEMICALS has come suddenly to an end in consequence of the settlement of the Midland coal strike and the resumption of operations in the chemical works in Lancashire, although it will be almost another week yet before the works get into full swing and able to turn out their normal quantity of manufactured goods.



THE WIDNES AND ST. HELENS Works have been all more or less stopped for want of fuel, and the consequent short production of chemicals will make itself felt in the market for some time to come. The American demand continues good, and shipments have been resumed from Liverpool during the last few days. Heavy shipments of caustic soda and soda ash have been made to the United States from the Tyne during the past week. There is hardly anything doing for forward contract, buyers preferring to buy from hand to month, in the expectation of a decline in prices.

WAGES IN MESSRS. TENNANT'S WORKS.—The award of Dr. R. Spence Watson, who was appointed about three weeks ago to act as arbitrator in the wages dispute between Messrs. C. Tennant & Partners, chemical manufacturers, Hebburn-on-Tyne, and their workmen, has just been issued. About fifty of the men get a slight concession, but the wages of the majority remain as before.

BICARBONATE OF SODA has been advanced to 6*l.* 5*s.* per ton in 1-cwt. kegs, f.o.b. Liverpool.

BLEACHING-POWDER is rather unsettled and prices range from 5*l.* 15*s.* to 5*l.* 17*s.* 6*d.* in softwood casks, and 5*l.* 17*s.* 6*d.* to 6*l.* in hardwood casks, f.o.b. Tyne, or 5*l.* 15*s.* to 6*l.* per ton for softwood casks, f.o.r. Widnes or St. Helens, and 6*l.* 7*s.* 6*d.* to 6*l.* 10*s.* per ton in hardwood, f.o.b. Liverpool.

CAUSTIC SODA continues very firm, with good demand for prompt shipment. White, 60 per cent., 10*l.* 10*s.*; 70 per cent., 11*l.* 10*s.* per ton. Cream, 60 per cent., 9*l.* to 9*l.* 10*s.*, f.o.b. Liverpool; 77 per cent., 13*l.* per ton, f.o.b. Tyne.

CHLORATE OF POTASH unchanged at 5*d.* per lb., shipment any port.

HYPHOSULPHITE OF SODA continues in good demand and prices are expected to advance shortly. 4*l.* 15*s.* and 4*l.* 5*s.* in 1-cwt. kegs and 5-7 cwt. casks respectively, f.o.b. Tyne, and 5*l.* and 5*l.* 10*s.* f.o.r. Manchester or Liverpool.

SODA ASH keeps improving in price owing to the heavy demand. *Caustic* and *carbonated* quoted 1½*d.* to 1¾*d.* per degree, Liverpool; and *carbonated ash* 1½*d.* per degree, f.o.b. Tyne.

SODA CRYSTALS are quoted for prompt delivery at 3*l.* 7*s.* 6*d.* to 3*l.* 10*s.* per ton in 3-cwt. barrels, net weight, f.o.b. Liverpool; 2*l.* 10*s.* per ton, gross weight, f.o.b. Tyne; and 2*l.* 17*s.* 6*d.* ex ship Thames.

SULPHATE OF COPPER firm for prompt, at 25*l.* 10*s.* to 26*l.*; April, 24*l.* 10*s.*; May, 23*l.* 10*s.* per ton.

SULPHATE OF SODA quiet at 32*s.* 6*d.* per ton for Widnes, and 32*s.* 6*d.* per ton, f.o.b. Tyne. Ground in casks, 42*s.* 6*d.* per ton, f.o.b. Tyne.

## THE GERMAN MARKETS.

HAMBURG, March 25.

NOTHING of any importance (except in the case of camphor) has transpired in the drug and chemical markets during the past week, and at the present juncture business is decidedly flat. The advance in tartaric acid reported in our last has been well maintained, and to-day prices have a still higher tendency; a further rise has also taken place in the price of cream of tartar. From the quotations given below it will be seen that camphor has depreciated in value; we are inclined to believe, however, that this is only temporary, being the result of the general depression and inactivity of the markets. As regards opium the market is still very unsettled, but quotations remain unaltered for the present.

ACIDS.—*Carbolic* in crystals 40° is obtainable at lower rates, and now offered at 250*m.*; *Tartaric*, 260*m.* to 265*m.*

ANTIMONY shows a slight decrease in value; *Regulus* is quoted at 167*m.*; *Crude*: Rosenbauer brand, 98*m.*; Japan, 100*m.*

ARSENIC.—Quiet but steady at 26*m.*

ALCOHOL.—Crude spirit, 22.25*m.*; rectified, 90-per-cent., 23.50*m.*

BALSAMS.—*Copaiba* (Maracaibo) remains very firm; 565*m.* is the figure now generally quoted. *Tolu* is quiet but steady at 275*m.* to 300*m.*; strained, 285*m.*; *Peruvian* from 825*m.* to 875*m.*

CAMPHOR.—Very quiet, and although a fall in the price was announced, very little business has been done; 500*m.* is the latest quotation.

CANTHARIDES firm at 8.20*m.*

CINCHONA.—There has been little or no demand for East Indian cinchona, but South American varieties have been in good request; the following are a few of the most important transactions: *Calisaya*, finest quality, 46 bales at 2¼*m.* per kilo; medium, 97 bales at 2¼*m.* to 2½*m.*; *Loza*, prime genuine quality, 6 bales at 2½*m.* per kilo.; *Porto Cabello* and *Maracaibo*, prime, 279 bales at 120*m.* per 100 kilos.; ditto, seconds, 241 bales at 80*m.* to 105*m.* per 100 kilos. Further shipments of *Calisaya* quills, Carthage and Columbia barks are expected in shortly, but for the most part these have already been bought up privately.

COCAINE is much cheaper, offering now at 455*m.*

CREAM OF TARTAR dearer; first quality powder, 99° to 100°, is now quoted at 230*m.*; 95° at 220*m.*

CUBEBS are in good demand at 950*m.*; it is stated that good berries are very scarce, and that higher prices are probable.

CUTCH.—Higher prices are demanded by owners, but no large sales have been done at such; 48*m.* to 68*m.*

ERGOT OF RYE has improved, and is now in good demand; 2.60*m.* to 2.70*m.* has been paid.

GALLS.—*Turkey* in demand at 100*m.* to 120*m.* *Chinese* dull and cheaper, 118*m.* to 125*m.*

GLYCERINE, S.G. 1.260.—The price arranged for this by the syndicate of manufacturers is 142*m.*, but a second-hand firm here offers the same quality at 130*m.* to 132*m.*

JALAP also better again, and owners are very firm at 2.60*m.* to 2.70*m.*

MORPHIA has advanced and is very firmly held at 200*m.*; it is affirmed that the manufacturers have refused to execute even large orders at 195*m.*

OILS (ESSENTIAL).—*Bergamot* and *Lemon* remain unchanged at last week's prices; *Cassia* is steady at 835*m.*; *Cajuput*, 410*m.*; *Otto of roses*, 570*m.* to 575*m.*; *Rosemary* is slightly dearer at 285*m.*; *Star-anise* is in good request at 13*m.* per kilo; *Menthol* firm at 17.50*m.*

OILS (VARIOUS).—Italian *Castor* cheaper, best, 81*m.* to 86½*m.*, and ordinary qualities down to 70*m.*; *Cod-liver oil* is in good supply at former prices, viz.:—47*m.* to 49*m.* per cask; and white, non-freezing, at 52*m.* to 55*m.* The official report on the cod fishery published at Lofoten states that during the week ending March 1, 1890, 5,000,000 fish were caught, producing altogether 3,430 casks of oil. The following were the official returns for the corresponding weeks in the two previous years:—Week ending March 2, 1889, 2,500,000 fish, 1,489 casks of oil; week ending March 3, 1888, 6,000,000 fish, 5,553 casks of oil. *Cocanut oil*, Ceylon, 51*m.*; *Cochin*, 57*m.*; *Palm oil*, Lagos, 46.50*m.*; *Old Calabar*, 44*m.*; *Accra*, 43*m.*; *Spirit of turpentine*, 65*m.*; May-June shipment, 59*m.*

SAFFRON.—102*m.* are now quoted, showing a slight decline.

SANTONINE.—An important reduction in the price of this is announced, 900*m.* being the present figure.

SARSAPARILLA.—Honduras, 3.20*m.* to 3.70*m.*

TAMARINDS.—Calcutta, prime quality, are offered at 19*m.*, a low price.

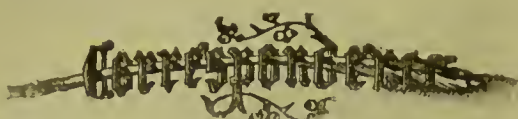
TONQUIN BEANS.—Best quality *Angostura*, 13*m.*; seconds, 10*m.*

WAX (JAPAN).—The upward tendency in Singapore has caused a slight advance here; 88*m.* is now asked.

## THE DUTCH CINCHONA AUCTIONS.

THE usual telegram from our Amsterdam correspondent has failed to reach us, but we understand that to-day's exceptionally heavy sale, comprising 408 tons, of which the manufacturing bark alone represented about 495,000 oz. quinine sulphate, went off steadily at the average unit of 9½ cents per ½ kilo., equal to 1¾*d.* per lb.





### Memoranda for Correspondents.

*Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.*

*Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.*

*If you send us newspapers, please mark what you wish us to read.*

*Ask us anything of pharmaceutical interest: we shall do our best to reply.*

*Before writing for formulæ consult the last volume, if you have it.*

*Letters, queries, &c. will be attended to in the order received.*

### One Trade, One Price.

SIR,—Allow me, through your pages, to give all the moral support that I can to the proposal of R. S. Farrer, in your last week's issue.

I am an old man travelling a road on the wrong side of sixty, so that I speak disinterestedly. Any change for the better in this starvation calling of a chemist and druggist cannot benefit myself; but I do call loudly upon the young men who are destined by time to take the places of the present employers, to be up and doing, to spare no effort at combining, and show to the public, the Government, and the Pharmaceutical Society that they do intend to improve the disgraceful pittance that chemists are at present forced to accept for their long hours and responsible services; we can, if we choose, by combining, dictate our own terms to the public as to price, and to the wholesale druggist as to his serving stores and hogus co-operative companies.

To show the pitiful sums we receive, even for the most responsible duties, I will quote "The Sale of Poisons Act." It is, has been, my habit to serve every listed poison in part 1 of the schedule (myself) that is asked for by anyone I know, or is introduced by someone also known, if an intelligent account can be given of its intended use, and on no occasion charge less than sixpence; now I will exhibit the amount not saying anything about coroners' inquests, penalties, and actions that we risk if we make the slightest error. I lately completed filling one poison book; the first sale registered is February 15, 1867, the last April 10, 1888, embracing twenty-one years; in that time I made one thousand sales, which at sixpence each amount to twenty-five pounds—that is, about two shillings per month, which at two-thirds profit amounts to fourpence per week. Recollect that it is at the sixpenny serving, so that those in the trade who oblige with three-pennyworth of Battle's Killer and such like, by a parity of sales, earn but twopence per week. Now in these poisons sales the chemists have a perfect monopoly—no other trade may sell them; so as a union we could, to use Mr. Carteighe's phrase, "stiffen our hacks" and resolve to negotiate none under one shilling.

I advise the young men to recollect, especially those who have qualified at the expense of brain and money, that these meagre profits prevent most of the trade keeping an assistant, and where they do, poverty compels the employer to hire a cheap unqualified one. I wish my brother-chemists would reform their niggardly ways, and for once dare to be men, and assert their rights. About fourteen years back, I was a candidate for the Council, and intended to legislate on popular lines, and came very near a seat. What prevented me winning? This! I received numerous letters to this effect: "My dear sir,—I admire your reforming principles and pluck, and would support you, but I do not subscribe to the Society: if I did, you should have my vote. Pray God you may be returned!"

I have recently been solicited to form one of the fourteen selected to outvote the present Council. The result would be exactly the same. Moreover, I do not think it would be handsome to make nearly the first use of the office of divisional secretary to try to overthrow those who have taken me into their confidence, and who, I maintain, do really

represent the wishes of the majority of the subscribing members.

The constitution of the Pharmaceutical Society is purely democratic. There are twenty-one members of the Council; fourteen go out every year, so if the trade subscribed, they could place a majority of their own selection, and the following year embrace the whole twenty-one.

Let us he men, and show to the Council what we mean, by the whole of the trade knocking at the doors of 17 Bloomsbury Square and tendering the fees as subscribing members; then we shall find no necessity to supplant Michael Carteighe and the twenty able gentlemen supporting him, for they are too intelligent not to know that within the limits of law and equity, they must obey the behests of the enlarged constituency.

Our only hope lies in supporting Farrer's proposed Chemists' Union and the Pharmaceutical Society, and thus compelling the latter to carry out what the Royal Charter in 1843 states that it was given for—viz., "for the purpose of advancing Chemistry and Pharmacy, and promoting a uniform system of education of those who should practise the same; and also for the protection of those who carry on the business of chemists and druggists."

ROBERT OWEN FITCH,

Member of the Pharmaceutical Society.

255 Well Street, South Hackney, N.E.

SIR,—In regard to Mr. Farrer's proposal, I would ask what is to become of us all while the system works. There is no organisation with a large capital to support the project, therefore where is the weekly allowance to come from, "after the notices have expired"? I for one should oppose anything in the nature of a "strike," which has at all times been the ruin of this country's trade, and we should never have the least support from the public. I agree with "hoycotting" the leading "cutters," and would not apply to one of them myself were I on my last legs. It would, however, be suicidal for assistants to do anything to extend such a feeling to those honest men who have had to compete in price for self-defence alone.

Yours truly,

March 22.

ASSISTANT. (15/32.)

SIR,—Mr. R. S. Farrer's letter will, I think, be read by the trade with amazement. A more preposterous proposition I have never before encountered. What is to become of the poor devil of an assistant after he has "stricken"; what is he to live upon while "out"; where is the needful to come from to establish the fund for relief?—not out of Mr. Farrer's pocket, I venture to think! The whole thing is mischievous, impracticable, and absurd. If such a notion were carried into effect by the trade, the public would go to the grocer for their drugs, who would be only too eager to supply them, leaving to the chemist a monopoly of the sale of a few poisons.

Your correspondent's statement that assistants are leading a "low and slavish life in drug stores at abominable salaries," is entirely untrue, as it is well known that the stores pay better salaries, and work their men less hours, than the ordinary retailers, and not at all on Sundays.

The cool offer in the last paragraph of Mr. Farrer's letter to interfere with the wholesale houses trading where they like is a piece of impudence which will perhaps amuse rather than terrify those concerned.

Imagine Mr. Beecham or any of the great advertisers of patents, refusing a 100% order from the Army and Navy Stores because Mr. Farrer's precious union objected. This scheme will not work!

Yours truly,

March 24.

COUGH DROP. (16/4.)

SIR,—Mr. R. S. Farrer has set himself an herculean task, or I think we might say several, for each of his nine points is not a trifle, and I, for one, fail to see how they can be brought into action. If every chemist agrees not to sell patents, &c., under marked prices, we may be very certain that drapers and grocers won't agree to do anything of the sort. I think that settles point 1. No. 2 is a good idea, and might be done. No. 3, ditto. No. 4 cannot and will not be done, because the assistants cannot afford it: if they had a powerful trade union, and a big reserve fund to back them



up things might be more favourable. No. 5 I take to mean when apprentice is out of his time, for when he is apprenticed he has not much choice. No. 6—the penalty might be enforced supposing the union is formed; but where and how is the man fined to procure the 2,000l.? No. 7—the same objection as to No. 4. No. 8—the difficulty as to the 2,000l. again comes in. No. 9—the non-engaged ones will go as dispensers to surgeons, or sell drugs off costers' barrows at the street corners. The condition of the drug trade is deplorable without a doubt, and there is also no doubt it will get worse, and numbers have to seek some other means of getting a living. We cannot hope to get an Act of Parliament compelling the British public to pay in full for patents, neither do I think the trade amongst themselves would combine for that end, and if they would, the outsiders would secure all the business. We might and ought to combine to have the sale of poisonous patents, and all drugs in our own hands, and I have not the least doubt it could be done if set about in a business-like manner, no matter what the Pharmaceutical Council say. If the public are as well served by grocers, drapers and companies, what on earth is the good of examinations? I also think a law could be passed compelling surgeons to keep qualified dispensers. We can't bring home poisoning cases to them, but there is not much doubt that they occur. We ought also to compel the passing of the preliminary before allowing a man to take an apprentice. Numbers enter the trade and manage to work up afterwards, but we are overcrowded now, and some check ought to be introduced. I should be very willing to make one in a chemists' union; for, with a good many others, I consider the Society neglect trade interests.

March 24.

Yours truly,

"GALLICUS." (16/28.)

SIR,—Unionism to be effective should be as complete as possible, but in Mr. Farrer's scheme there is a yawning gulf sufficiently wide to spoil the whole plan. We are all at one with him to help forward an unfortunate trade, but I don't see how this is to be brought about in the manner proposed, as it takes no notice of the strong force outside the ranks of pharmacy. There are several large firms in London, who deal amongst other things very largely in drugs.

[Our correspondent then gives instances, and quotes cutting prices—all too familiar.]

Again, are there not probably as many unqualified as qualified men in our own ranks? What does Mr. Farrer propose to do with all this "cursed rabble"?

Yours obediently,

S. G. (16/33.)

Mr. R. A. Blanchford thinks the scheme would be an effectual method for confining the chemist's business to its legitimate channels, and suggests that a deputation wait on the various schools of pharmacy (metropolitan and provincial) with a view to obtaining signatures in favour of the movement.

SIR,—Mr. Farrer's communication deserves a certain amount of consideration because it is certainly original, and I must congratulate him upon the happy possession of that disposition which enables him to fix his gaze upon the object in view, and think lightly of all difficulties which have hitherto frustrated the endeavours of men of average mental capacity. I observe that throughout his letter there runs a vein of selfishness, and that, in order to gain his own ends, he is entirely callous to the fact that thousands would have to suffer privation, and possibly starvation. Can he imagine an assistant in a drug store so badly advised as to throw up a fairly remunerative position, go out on strike, and subject himself to want, in order to put perhaps 50l. a-year into some chemist's pocket in business, who would hardly have the decency to thank him?

With one of his many ideas I am pleased to find we are agreed—I allude to the union, by which I presume he means a pauper asylum, for those whom he will throw out of situations by the operation of this gigantic and almost miraculous scheme. If he could manage to include in the prospectus a lunatic asylum as well, he would be materially increasing the safety and welfare of Her Majesty's subjects; for pride

and poverty, with want of occupation, would be sure to drive some of the unemployed insane.

Yours truly,

Lee, March 25, 1890.

A. C. SMITH.

SIR,—Kindly allow me to thank the numerous gentlemen throughout the three Kingdoms for their responses and good wishes. Up to posting this—9.50 P.M. (Tuesday)—I feel confident of success. No body of men on the Pharmaceutical Council can prevent cutting chemists carrying on drug stores. The utmost they can do is to run a Bill through Parliament to restrict companies dispensing, selling drugs and poisons. This is what the cutters want; they are waiting and praying for the Council to do this to double their trade. May I ask all to publish my letter well? It has met with great approval.

Yours obediently,

R. S. FARRER.

Waterloo Pharmacy, Stroud, March 25, 1890.

[We have no wish to interfere with any genuine manifestation of trade energy, whether we agree with it or not. But this scheme of Mr. Farrer's appears to us to be so utterly hopeless and unjustifiable, that we cannot undertake to give more space for its discussion. We are quite willing to publish announcements of the results obtained, and will give Mr. Farrer and his disciples such facilities for communication as may be necessary to carry out their ideas.]

#### Reform of the Pharmaceutical Society.

SIR,—We have urgently to appeal to all members of our trade or profession who are interested in endeavouring to obtain the legitimate demands of chemists through the only recognised organisation available, namely, the Pharmaceutical Society—incorporated by royal charter in 1841 for the purpose, amongst others, of protecting those who carry on the business of chemists and druggists—to do their very utmost to return to the Council the candidates nominated, and shortly to be announced, pledged severally and jointly to restore the care of trade interests to its proper place in the Society's policy.

We trust the electorate will receive our candidates with enthusiasm, and spare no effort to secure their return by large majorities, and thus show their sympathy with those who—feeling very deeply the present deplorable condition of pharmacy, which nearly everybody will agree is being ruined by the unjust, unfair, cruel competition of incompetent, untrained, unexamined, and uncertificated general traders—are both anxious and willing to undertake, to the best of their power, to remove some at least of the disabilities under which the trade at present groans and sweats.

Voters! For many years past you have not had an opportunity of showing in so practical a manner that you desire your Council to undertake these measures on your behalf; will you not specially mark this opportunity? Will the apathetic and indolent voter not rise to this occasion? We ask all who approve of our endeavour to assist by canvassing his town or district on our account, and those who under more favourable circumstances would have offered themselves as candidates, to work equally hard for those who undertake in their stead. Let all miserable petty differences be put on one side, that our united efforts may be crowned with success. I am, sir, yours faithfully,

Cardiff.

ALFRED COLEMAN, Ph. C.

#### The Legitimate Demands of Chemists.

SIR,—So much has been said and written of late about the British chemist, and so much eloquence has been used in furtherance of ideas having for their practical realisation the bettering of his condition, that it would not be amiss to have a fair statement as to his present condition and the necessity for reforms being carried out in his favour.

With reference to his present condition, I suppose it may be taken for granted that there must be something wrong with it, or we should not be almost inundated with letters complaining of it. Many of the letters complaining of the chemist's present condition must be looked upon as emanating from people who are never satisfied, and who would never be thoroughly content were even their own schemes



carried out. But many must be treated as the legitimate complaints of men in an unsatisfactory position, from which they are anxious to escape. The general drift of the latter is the hardship of competition from unqualified men, and the *summum bonum* of the hardest and most venturesome scheme-formulators is the restriction of the sale of all drugs and medicines to the chemist and druggist.

It may be possible to derive some idea of the present status of the chemist from the plans which have been suggested for his relief. On the one hand is the plan of education, on the other that of restriction. It is obvious that these two ideas are mutually destructive. If the chemist needs further educating before he is competent to discharge the duties which fall to him, he is evidently unfit to have the sole right to the performance of those duties. If, on the other hand, he is to have the sale of drugs and compounding of medicines entirely restricted to him, he must be sufficiently educated up to the competent discharge of his duty, and therefore further education is superfluous. Thus, one of our reformers thinks that the chemist is not good enough for what he does, and the other thinks that what he does is not good enough for what he is.

The views of what may be termed the educationalist are not new, and seemingly, from the ill-luck which dogs his footsteps in his attempts at reform, not very convincing. His argument, summed up shortly, is that the ordinary pass-man is a "crammed-man," and that he owes his qualification more to his own luck and the deficient test of an examination than to any really well-acquired stock of learning. The only way out of such a state to those of that opinion is a curriculum. They seem to forget that however lengthy a curriculum may be, and however exacting, no amount of such exactions will turn a lazy fellow into an industrious one, or prevent a man being crammed if he wills it. So that after all there must be an "exam."—of course no one said there should not be, but it was assuming a secondary place—and this exam. must confine itself within certain limits. The question, therefore, is whether the Minor exam., as at present carried out, is adequate to the requirements of the British public (for it is that, and not the Pharmaceutical Society, whom we have to look to) to protect it against ignorance. I think the answer must fairly be in the affirmative. If that be so, where is the justice of enacting from the candidate other knowledge? It is entirely a question of the return for outlay and value for money, and no one has a right to ask any man to invest his time, his brains, and his money in pursuit of knowledge which he will never require in the ordinary duties of his calling. If he chooses to voluntarily add to his knowledge, so much the better, but it should not be compulsory. I have no sympathy, therefore, with the educationalists on this point. Their dreams are schemes, and their schemes are dreams.

The other reformer thinks that the qualified man has already invested sufficient time and money in acquiring as much knowledge as the public have a right to demand from him. But he thinks the public do not give him sufficient return for his investment. Now, what is the practical side of this? We have escaped from the "professional" element in dealing with this class of reformer, but we have to meet a stranger idea still. We are asked to swallow the notion that any Parliament will entertain (even for a moment) the protection of one class of traders against another, because the latter wish to sell more cheaply than the former. What possible difference can there be to me, as one of the public, whether I get 2 oz. of carbonate of sodium from the chemist or from the grocer, if it be the same article? What can it matter to me whether the change is given me by a chemist's apprentice or a grocer's assistant? I go for the article and get it. If I think I can get a better article at the chemist's by paying a little more for it, that is my look out. But I ought not, therefore, to wish to deprive the grocer of his right to sell it. Oh, it may be said, but the grocer knows nothing of what he is selling. Well, in the matter of poisons he may not, but all knowledge is from experience, and the grocer's experience in the matter of the "soda carb." may be good enough for the transaction. So that it seems Quixotic to attempt the artificial creation of a millennium for chemists by the restriction of the sale of drugs.

I have dealt with the ideas of our reformers. Just a word in conclusion as to what chemists might do. If,

instead of rushing into print with hysterical complaints about competition, they would make a few more things themselves; if, instead of lowering themselves to the level of grocers and hucksters, by simply becoming the "middle-man" of other people's goods; if, instead of trying to become "leading chemists" by stocking all the latest novelties in remedies—all made by other people—they would keep their eyes open and their brains active by trying to make those things themselves, and letting outsiders—doctors and public alike—know it, they would find less time to complain, and less still to complain about. I know it will be said that such things are all right for big houses and well-to-do firms, but that small men cannot afford it. But time is money, and if a little of it were employed in an attempt to make a little more money, instead of wasting it in growling about the scarcity of money, we should reach a point of education which would vie with the most elaborate (and, therefore, least practicable) scheme ever imagined, and bring about a "restricting" sale—restrictive by the proposed skill of the chemist, and not by the artificial barrier of legislation—which would satisfy the mind, and, what is more to the point, the pocket, of the most advanced protectionist who ever interested himself in our trade.

I remain, Sir, yours, &c.,

H. R. (13/65.)

#### Saccharin with Potassium Iodide.

SIR,—I note an interesting paper in your current issue by Claude F. Henry, read at the meeting of the Edinburgh Chemists' Assistants' Association, and entitled "A Dispensing Query." I have investigated this little matter since hearing of it, and subjoin the result of a few experiments to prove the cause of the coloration when the powders are mixed with water:—

(1) Potassium iodide (free from iodate) was mixed with saccharin and stirred into a little water, but no coloration took place.

(2) Iodine was added to liquor potassæ until faintly yellow, the solution evaporated to dryness, and the remaining salt dissolved in water and kept for examination.

(3) A small quantity of this solution was mixed with a little saccharin, when an intense yellow colour was obtained, which turned starch-blue.

When iodine is added to liquor potassæ, iodide and iodate are formed, and saccharin, being a weak acid, is capable of freeing iodine from potassium iodate.

Inference:—That the sample of iodide of potassium used in making the powders contained iodate, consequently the child was taking free iodine.

This may be remedied by adding  $\frac{1}{4}$  to  $\frac{1}{2}$  a grain of potassium bicarbonate to each powder, but if the iodide is pure this is unnecessary.

Birkenhead.

A. F. BROOKES.

#### Calomel and Hydrocyanic Acid.

Mr. T. H. Powell, of Denmark Hill, S.E., writing in regard to Fouquet's experiments on the reaction between calomel and hydrocyanic acid (p. 391), calls our attention to the fact that in 1876 he, in conjunction with Mr. J. Bayne, investigated the nature of the decomposition which occurred in an ointment containing calomel, hydrocyanic acid, and lard. We have referred to this paper, and find that Messrs. Powell and Bayne conclusively proved the truth of Scheele's theory, and showed that bichloride of mercury is formed, but that the decomposition is stopped when a certain amount of hydrochloric acid is set free. This is exactly what Fouquet has done, fourteen years after the publication of Messrs. Powell and Bayne's results.

#### The Warranty of Drugs.

SIR,—In a recent case tried under the Food and Drugs Act, it was elicited in the evidence for the prosecution that the retailer had no remedy against the manufacturer who supplied him with a certain article—which had been ordered, labelled, and invoiced as B.P.—for which the retailer had been summoned, unless the said article was accompanied by a written warranty from the maker. It was also stated that if this warranty was attached to an invoice it would



include the whole of the articles mentioned therein. On this point I should like other opinions. This warranty being mentioned in the 25th section of the Sale of Food and Drugs Act, still holds good. How is it, then, that so few of us know anything about it, and that we never hear of wholesale houses undertaking to send these written guarantees every time they send us B.P. preparations? If they did they would protect the retailers from vexatious prosecutions from their district analysts. It might be said that chemists should test every one of their own articles. If so, how many have the needful time, convenience, apparatus, volumetric solutions, &c., for the accurate determination for purity of the whole of their varied stock, so as to have everything up to B.P. standard? If the manufacturers will do their share, we retailers will do our best to keep up the high standard required nowadays.

Yours truly,

ASSOCIATE. (20/16.)

## LEGAL QUERIES.

8/35. *Opodeldoc*.—The Board of Inland Revenue have never authorised the preparation of lin. opii with methylated spirit; but the soap liniment, which forms half of it, may be made with methylated spirit. It would not, however, be strictly legal to use the preparation so made in dispensing a medical man's prescription.

13/9. *L*.—It is the exhibition or distribution of labels or handbills relating to venereal diseases, not their possession, which is prohibited by the Indecent Advertisements Act.

12/56. *W. F. G.*—We do not see in the announcements you inclose any infringement of the Dentists Act. Your reading of the Act and of the Veterinary Act corresponds with our own.

14/58. *Cycling*.—We think the title you indicate would justify the proprietor, whose reputation would be obviously traded on, in applying for an injunction, and we should expect he would get one with costs. You are not justified by law in selling Easton's syrup to a stranger un-introduced.

17/29. *A. D.*—Probably your predecessor owed money to the house. If so they would be justified in refusing to allow you for the tin. If you bought from your predecessor what was not his to sell you must recover from him or not at all.

16/38. *Scottie*.—The executors of a deceased chemist are at liberty to carry on the business with a qualified manager, and we see no legal reason why they should not take their manager into partnership. The style under which the business will be then carried on is immaterial. Several presidents of the Pharmaceutical Society have carried on business under the names of non-existent persons.

12/65. *J. W. F.*—We think your inspector of weights is wrong, unless in your weights there is some lead projecting above or beyond the surface of the weight. In the principal Act, 1878, section 30, it is expressly permitted to insert into a weight such a plug of lead or pewter as is *bonâ fide* necessary for the purpose of adjusting, and of affixing thereon the stamp of verification. And in the Model Regulations, issued by the Board of Trade, 1890, section 26 says, "Brass weights may be adjusted by drilling a small hole in the weight, and inserting therein a plug of lead or other metal, the hole being afterwards capped or hammered over the plug."

18/68. *J. Stewart*.—If you study the Pharmacy Act you will see that the questions of labelling poisonous medicines and selling them depend on different sections. The 16th section says, "nothing *hereinbefore* contained" is to apply to the dealing in patent medicines (whatever patent medicines may be), but it is the 17th section which prescribes the regulations about labelling, and this is not affected by the exemption clause.

17/12. *Chemist*.—We are surprised that you are surprised at the conviction at the Mansion House, on March 21, for selling a medicine containing poison, not fully labelled. The liability has been indicated in this journal and in the DIARY every year for many years past.

13/31. *Operative*.—In the latest reprint of the British Pharmacopœia the terms paregoric and paregoric elixir have been given as synonyms for tinct. camph. co., in order, we assume, to make it illegal to sell as paregoric any compound other than the tinct. camph. co. of the Pharmacopœia.

## DISPENSING NOTES.

*The opinions of practical readers are invited on subjects discussed under this heading.*

9/12. *Perplexed*.— $\bar{5}j$ . means 480 grains; oz. stands for the avoirdupois ounce of  $437\frac{1}{2}$  grains. See "The Art of Dispensing," page 13.

110/31. *P. Moss*.—Pil. ferri co. P.L. appears to be what was wanted.

15/73. *R. F.* asks why the following mixture becomes turbid:—

Potass. bicarb. ..	..	..	..	..	5ij.
Aq. camphoræ ad	..	..	..	..	5viij.

## Potass. Iod. and Ether in Mixture.

SIR,—I would feel very much obliged if you would give me an explanation as to the formation of the precipitate in the following mixture:—

Potass. iodid. ..	..	..	..	..	grs. 120
Ætheris sulph.	..	..	..	..	5ij.
Syr. zingiber.	..	..	..	..	3ss.
Inf. serpent. ad	..	..	..	..	3vi.

Misc.

This, when the ether was added, turned out a black mixture, which, being allowed to stand for an hour, presented a clear mixture with a deep black precipitate, which disappeared in about a week.

An enlightenment on this subject through THE CHEMIST AND DRUGGIST would greatly oblige

Yours truly,

I. E. B. (11/72.)

[It is almost impossible to get ether absolutely free from hydrogen peroxide or some other oxygen-yielding body, and this liberates a little iodine from the potassium iodide. The free iodine combines with the starch of the serpentary. This is the black precipitate observed by our correspondent. Serpentary root from old plants does not contain starch. This root should be used if it can be obtained.]

10/63. *George*.—(1) The best way would be to dissolve the sulphate of iron in the dilute acid, and add to the tincture of quinine; but still it would be precipitated, as it is but sparingly soluble in proof spirit. (2) We cannot credit the statement that a Bloomsbury Square examiner has rejected a candidate because he dispensed 20 minims for  $\bar{5}j$ . of vin. ipecac. If the candidate felt satisfied that that was really the case, he ought to have spoken about the matter to the chairman at the time. (3) The balance of opinion in the aqua menthæ discussion was that aq. menthæ pip. is the thing which should be dispensed, but tradition says aq. menthæ virid., and the Bloomsbury Square examiners are in favour of the latter interpretation, whereas the Edinburgh examiners are in favour of aq. menthæ pip. In short, it is a case of "You pays your money, and you takes your choice."

11/57. *W. H. J.* asks us why a bright mixture can be made of Tr. Quin. Ammon. and water, if a small quantity



of liq. ammon. acet. is first added to the tincture. We entirely fail to get this result, except with small quantities of water, and then it is as good without the milder spirit.

38/26. *J. Wright*.—The Pharmacopœia permits the use of either artificial or natural salicylic acid, and its sodium salt, provided they respond to the tests of purity given. But these tests do not detect the presence of an impurity which Professor Charteris has found to be lethal to small animals. We have published a great deal on this subject within the past two months.

#### Overheating Suppositories.

SIR,—Actuated by your request in your issue of Feb. 22, under "Ferri Pernitrate in Suppositories," I have been making some experiments on the subject with the following results:—The melting-point of the oil of theobroma employed was found to be 32° C. This was carefully melted on a water-bath, and, when commencing to thicken the iron pernitrate in fine powder was added, no further heat being employed, the melting-point again taken and found identical with the first—viz., 32° C. A portion of the mass was then heated to 65° C, with constant stirring; at about 55° a vigorous reaction was set up, and fumes of nitric oxide gas evolved. On taking the melting-point of this mass, it was found to be no less than 47° C. From this it appears to me to be quite possible to dispense the prescription satisfactorily, if due care be taken not to overheat it. As I had recently heard of some urethral bougies of iodoform being ejected entire, I made a like experiment with that body, heating the mixture to 65° C. Though I found decomposition of the iodoform apparent, yet the melting-point was not increased; the probable explanation of the case being, the addition of some wax.

Yours truly,  
A. EBERLIN.

2 Chapel Bar, Nottingham, March 25, 1890.

#### MISCELLANEOUS INQUIRIES.

*A large number of correspondents ask us for formulæ and other information already published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulæ or replies required are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4d. each.*

*Correspondents who have made inquiries regarding the following subjects will find the information in the numbers indicated.*

12/36. *Distiller*.—How Celluloid is made.—See November 17, 1888, page 703, and December 22, 1888, page 846.

15/58. *G. J. S.*—Effervescing Saline.—See March 23, 1889, page 416.

9/65. *Ovis*.—Rose-pink is made by colouring whiting with a decoction of Brazil-wood, to which a little carbonate of potash has been added.

18/30. *J. E. G.*—Lanolin Cold Cream.—June 22, 1889, page 865, and October 19, 1889, page 578.

9/30. *Geo. F. C.* asks "why the addition of sugar to aerated water should increase the liberation of carbonic acid gas." Any solid would, in virtue of the fact that it presents points of contact which reduce the affinity between the water and the gas. Moreover, some of the sugar dissolves, and carbonic acid gas is less soluble in a solution of sugar than in water.

9/60. *Spero*.—You must read the article with intelligence. We distinctly state that it is the examination for registration by the General Medical Council as a medical student

that we referred to, and it is stated that the Scotch universities accept this certificate of registration, "requiring in addition either logic or Greek." What you require to do, seeing that you are situated in the West of Scotland, is to take out algebra, euclid, and mechanics, at the Educational Institute's examination, or at the Glasgow University, and having got the certificate for these subjects, submit it, with your Preliminary and Minor certificates, to the branch Registrar of the General Medical Council at Edinburgh. After that you are entitled to enter upon your studies for a medical licence, but the universities will demand the other subjects before allowing you to proceed to their degrees.

9/68. *A. P. S.*—*M.B. London* qualifies for registration as a general medical practitioner, and no other qualification is required for practising as such.

10/62. *Pendragon* asks what farmers use in conjunction with Cooper's sheep-dipping powder in order to give the wool a better colour after dipping. It depends upon the colour required. In different localities clay, raddle, ochre, or umber, is used, and one of these would probably give satisfaction.

11/40. *Student* would like to know the correct definition of the word *Poison*. The ordinary definition is that a poison is any substance which, when swallowed or applied to the living body, disturbs, destroys, or suspends one or more of the vital functions. By Act of Parliament the word is limited to those substances which are named in Schedule A, and those which have been added since by Orders in Council.

11/11. *Quercus*.—*Medical Preliminary Examination*.—The apothecaries' assistants' certificate (London) is not accepted in lieu of the above, as it is not an examination in general education.

11/35. *J. L.*—The constituents of the *Canary Food* appear to be oatmeal, 1 lb.; sugar, 2 oz.; maw-seed,  $\frac{1}{4}$  oz.; and coarsely powdered chillies (mild), 1 drachm. The proportions are approximate.

12/15. *M. B.*—(1) Get the Directory of the Science and Art Department, published by Eyre & Spottiswoode, East Harding Street, E.C., at 6d. (2 and 3) Address the secretary of the London University, Burlington House, Piccadilly, W.

#### Information Wanted.

[Replies to the following requests are solicited by correspondents of THE CHEMIST AND DRUGGIST.]

15/61. "*Quevenne of iron*."—History of this synonym for reduced iron, or in what book I can find it. Have hunted up text-books, Pharmacopœias, year-books, journals, and only find it mentioned once in Cooley.—REDACTUM.

16/69. Names and addresses of makers of machinery and utensils used in soap making.

14/8. Neat's-foot oil as used by medical rubbers; who supplies.

14/12. Makers of covered hand-carts, as used in London by bakers, &c.

14/22. "*Venette*"; who is the maker.

18/31. Maker of Dr. Allingham's syrup of lachnantes.

17/30. Maker of indiarubber corks.

18/50. Makers—in Yorkshire preferred—of sheep-dipping machines, with hoist, &c.

*F. R. & Co.* We have some replies to an advertisement to the above initials, but have not the name of the firm who inserted the advertisement. Shall be glad to hear.

15/2. Where to obtain Dr. Michael's acorn cocoa.



From the following scene, together with the fact of his *NEVER ONCE USING THE WORD IN ALL HIS WORKS*, is it to be inferred that Shakespeare was unacquainted with "SOAP"?

MACBETH, ACT V., SCENE I.—*New Reading.*



*Lady Macbeth.*—What, will these hands ne'er be clean?

*Gentlewoman.*—Ay, Madam. Here, for a Shilling, is a sovereign remedy, fragrant of "all the perfumes of Arabia."—**PEARS' SOAP.**



# MORSON'S

## PURE NATURAL SALICYLIC ACID AND SALICYLATE OF SODIUM

### FROM OIL OF WINTERGREEN.

Experimental Research as to the General Comparative Action of the Natural and Artificial Salicylic Acids, and their Salts of Sodium. Read in the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association held in Leeds, August, 1889. By M. CHARTERIS, M.D., Professor of Therapeutics in the University of Glasgow, and W. MACLENNAN, M.B., C.M.

See *BRITISH MEDICAL JOURNAL*, Nov. 30, 1889.

The deductions from these experiments indicate that artificial salicylic acid and its salt of sodinm are dangerous and, in large doses, fatal to animals, while salicin, natural salicylic acid, and its salts of sodium are not. That artificial salicylic acid contains an impurity or impurities, and until this or these can be extracted by the aid of chemistry the internal administration of it or its salts of sodium should be discontinued. Large and repeated doses of the sodium salt are necessary in the treatment of acute rheumatism, and hence we may account for the restlessness, the confusion, and the delirium sometimes attendant on its use, which have been testified by clinical experience. It is more than probable, too, that the retarded convalescence occurring in some cases of acute rheumatism after the salicylate treatment is due to the great and protracted prostration which the impurity or impurities give rise to. It is to be remembered in connection with these symptoms that prescriptions of the salicylate of sodinm are invariably made up, unless otherwise indicated, from the artificial and not the natural salt.

The specimens with which the investigations were carried on were supplied by T. MORSON & SON, London—the Natural Acid and its Soda Salt being manufactured by themselves.

Medical men wishing to avoid the unpleasant and injurious effects of the artificial products, should prescribe the "Natural" preparations—MORSON'S.

31, 33, and 124 SOUTHAMPTON ROW, LONDON, W.C.

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Copaiba, Copaiba and Sandal Oil, Sandal Oil, Castor Oil, Cod Liver Oil, Terebene, Cascara, Male Fern, and numerous others. Amyl Nitrite, &c., in glass.

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Supplied in handsome boxes or in bulk.

#### Bougies, Pessaries, and Suppositories.

The attention of the Trade (Wholesale and Retail) is called to these. Our Glycerine Suppositories for children and adults are having a very large sale, and are put up in a very superior style. Any forms prepared to order.

#### Hypodermic Injections.

(Huggett's)

We are Agents for the Sale of these, which are strongly recommended as reliable, stable, & unchangeable. Special Lists on application.

These Premises have been specially fitted by B. HOOPER & CO. with an improved installation of Machinery, &c., to meet the increasing demand for their Specialities. To prevent delay we respectfully ask our clients to see that all Wholesale orders are sent direct to our new address.

A NEW PRICE LIST WILL SHORTLY BE ISSUED.



## SCHERING'S

### PHYSIOLOGICALLY PURE ACID SALICYLIC and its SALTS.

---

THE paper read by M. CHARTERIS, M.D., at the Medical and Chirurgical Society on February 11, shows that artificial Salicylic acid and its salts, although obtained at the highest melting-point, thus, chemically speaking, ensuring the utmost purity, may yet differ in its physiological action from natural.

B. FISCHER had already shown, in March 1889, in a most valuable contribution to the knowledge of the degree of purity of Salicylic acid used in medicine, that the presence of more or less Creasotic acid could unmistakably be ascertained by the melting-point, and that SCHERING'S and Von HEYDEN'S specimen of acid, showing melting-points of  $156^{\circ}$  and in the particular case of SCHERING'S dialysed  $156\frac{1}{2}^{\circ}$ , containing on independent examination from 1 to 0.7 % of Creasotic acid relatively, being therefore the best artificial acids occurring in commerce, while other makes, running as low as  $153\frac{1}{2}^{\circ}$  melting-point, proved to contain up to  $5\frac{1}{2}$  % presence of Creasotic acid.

Further proof also is that Creasotic acid, having a melting-point of  $150^{\circ}$  to  $151^{\circ}$ , the more or less presence of Creasotic acid in Salicylic acid would of necessity incline the melting-point towards  $150^{\circ}$ .

It is much to be regretted that B. FISCHER'S interesting paper in the *Pharmaceutische Zeitung* was not translated and published at the time in one of the leading pharmaceutical prints of this country, which would have saved a great deal of misconception, and would have enabled many of our able British Pharmacists to have examined the quality of Salicylic acid and the salts in use.

The principal question is now for the medical practitioner to consider whether the presence of 1 % Creasotic acid in Salicylic acid, and consequently  $\frac{1}{2}$  % in the salts, would cause inconvenience to his patient, especially when knowing that Creasotic acid is a very soluble chemical body, and therefore passing out of the system readily enough.

Important it is for the profession and the trade to know that the Chemische Fabrik auf Actien, vormals E. SCHERING, Berlin, are now making a physiologically pure Salicylic acid and also its salts, and we are now receiving these preparations at a slight extra expense.

Even the most timid of the consumers may then be able to indulge in a luxury at a very low cost, and need not be taxed unnecessarily by the extravagant price of the naturally obtained Salicylic acid.

Yours respectfully,

**A. & M. ZIMMERMANN,**

SOLE WHOLESALE AGENTS.

London, February, 1890.

P.S.—The melting-point of the natural acid is  $156.8^{\circ}$  and that given in the P. B. is  $155^{\circ}$ .



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PHARMACEUTICAL CHEMISTS, EXPORT DRUG MERCHANTS,

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Formiates, Acetates, and Butyrates of Methyl, Ethyl, Isobutyl and Amyl, &c.

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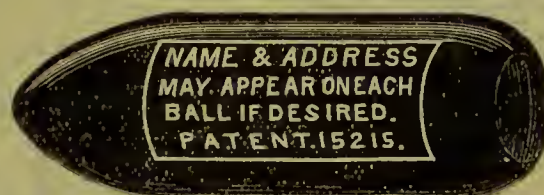
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" 12.—Condition Balls...	...	...	24/	"
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" 7.—Cough Balls	...	...	24/	"
" 16.—Cough Balls	...	...	27/	"
" 17.—Cough Balls	...	...	27/	"
" 8.—Diuretic Balls	...	...	24/	"
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" 1.—Physic Balls	...	...	24/	"
" 2.—Physic Balls	...	...	30/	"
" 3.—Physic Balls	...	...	36/	"
" 18.—Physic Balls	...	...	42/	"
" 19.—Physic Balls	...	...	48/	"
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" 10.—Tonic Balls...	...	...	24/	"
" 11.—Tonic Balls...	...	...	20/	"
" 13.—Worm Balls	...	...	30/	"
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The names and weights of the active substances are printed very clearly on each pill or granule. The object of an easily read inscription, such as this, is to obviate those errors which may so easily occur in handling ordinary granules. The seriousness of such mistakes is a direct consequence of the action of the substances employed. The inscription gives every security both to the invalid and the doctor. The process of manufacturing printed pills and granules makes it possible to obtain absolute homogeneous masses, in which the active principles are uniformly distributed and mathematically dosed. The covering is of a nature which preserves the most changeable medicaments, such as iodide of iron, in all climates. All our various pills and granules are further distinguished by the colour of their covering. The printing is done by means of lampblack, and the colouring matter employed for the coverings is entirely of a vegetable nature.

EXTRACT FROM PRICE LIST FRENCH PHARMACOPŒIA.

NAMES OF SUBSTANCES	Weights		Prices	NAMES OF SUBSTANCES	Weights		Prices	NAMES OF SUBSTANCES	Weights		Prices
	French Milligram	English Grains	Bottles of 100, viz. 8½ doz.		French Centigram	English Grains	Bottles of 50, viz. 4½ doz.		French Centigram	English Grains	Bottles of 50, viz. 4½ doz.
Amorphous Aconitina ..	1/2	1/120	3	Acetate of Morphia ..	1	1/6	1 3	Cocaina .. . . .	1	1/6	1 8
Crystallised Aconitina ..	1/10	1/600	3	Salicylic Acid .. . . .	10	1 2/3	0 7	" .. . . .	2½	5/12	2 0
Arsenate of Soda ..	1	1/60	3	Aloes .. . . .	10	1 2/3	0 7	" .. . . .	5	5/6	2 10
Arsenate of Strychnia ..	1/2	1/120	3	" " " " " or "Scotch Pills"	—	—	0 6	Ergotina .. . . .	1	1/6	0 10
Bi-chloride of Hydrar- gyrum .. . . .	1	1/60	6	Benzoate of Lithina ..	1	1/6	0 8	" .. . . .	5	5/6	0 10
Bi-iodide of Hydrar- gyrum .. . . .	1	1/60	6	Bromhydrate of Quinaia	5	5/6	1 3	" .. . . .	10	1 2/3	0 10
Colchicina .. . . .	1/2	1/120	8	" .. . . .	10	1 2/3	1 8	Extract of Bella-lonna ..	15	2 1/2	0 10
Acetate of Morphia ..	1	1/60	7	" .. . . .	15	2 1/2	2 0	" .. . . .	1	1/6	0 7
Hydrochlorate of Morphia	1	1/60	8	Bromide of Camphor ..	20	3 1/3	2 6	Amorphous Quassina ..	2	1/3	0 10
Phosphoric Acid .. . .	1	1/60	8	" .. . . .	1	1/6	0 7	Santonina .. . . .	2	1/3	0 7
Phosphuret of Zinc ..	1	1/60	8	Caffeina .. . . .	5	5/6	0 8	" .. . . .	5	5/6	0 8
" .. . . .	2	1/30	8	Calomelas .. . . .	1	1/6	0 7	Sulphate of Quinaia ..	5	5/6	1 3
" .. . . .	4	1/15	8	" .. . . .	5	5/6	0 7	" .. . . .	10	2 1/3	1 8
Picrotoxina .. . . .	1	1/60	8	Hydrochlorate of Quinaia	5	5/6	1 3	" .. . . .	15	2 1/2	2 0
Crystallised Quassina ..	1	1/60	8	" .. . . .	10	1 2/3	1 8	" .. . . .	20	3 1/3	2 5
Extract of Strophanthus	1	1/60	10	" .. . . .	15	2 1/2	2 0	Sulphate of Sparteina ..	2½	5/12	0 10
Sulphate of Strychnia ..	1	1/60	8								

The preceding list comprises only a very small portion of the Pills and Granules prepared by the Firm of L. Frère. Their complete Catalogue contains the various formulæ of the French Pharmacopœia, also the leading ones of the British Pharmacopœia, as follows:—

BRITISH PHARMACOPŒIA				PRICES			BRITISH PHARMACOPŒIA				PRICES		
				Per Gross	Per lb.	Per Bottle of 50 pills					Per Gross	Per lb.	Per Bottle of 50 pills
				s. d.	s. d.	d.					s. d.	s. d.	d.
Aloes Barb.	P. B. gr. iv.	..	..	1 0	10 0	4	Ferri Carb.	P. B. or "Female Pill"	..	1 0	8 0	4	
Aloes and Ferri	P. B.	..	..	1 2	10 4	5	Blue Pill	P. B.	..	1 0	10 0	4	
Aloes and Myrrh.	P. B.	..	..	1 7	12 0	6	Rhei Co.	P. B. or "Compound Rhubarb"	..	1 4	12 0	5 1	
Asafœtida Co.	P. B.	..	..	1 4	10 4	5 1	Aperients	or "Antibilious Pill"	..	1 0	10 0	4	
Calomel Co.	P. B. or "Calomel Pill"	..	..	1 2	10 0	5 1	Podophyllin	gr. 1/4 6,000 per lb.	..	1 2	20 0	5	
Colocynth Co.	P. B. or "Colocynth Pill"	..	..	1 8	16 0	5 1	Acid. Arsenios	gr. 1/60	..	1 0	10 0	4	
Coloc. and Hyos.	P. B.	..	..	1 7	13 0	6	Atropa	gr. 1/60	..	2 4	32 0	5	
Ferri Iodid.	P. B. gr. iiii.	..	..	1 8	18 0	6 1	Digitalla	gr. 1/60	..	1 4	28 0	5	

The above are the principal pills in daily use, and those P. B. are made in strict accordance with the formulae of the British Pharmacopœia. In proportion with the demand, other kinds will be added to our list, at equally low prices.

NOTE.—Beyond the pills and granules mentioned in our price list, we manufacture to order any kind of pill or granule of which the formula may be furnished to us, with whatever inscription the client may select. These special orders cannot be undertaken for a less quantity than two kilogrammes (4 lb. 7 oz.). It is also necessary to give (1) the colour selected for the covering, (2) the inscription written very distinctly. This lettering cannot occupy more than 18 European letters. The spaces between the words count as a letter. For the Hindoo languages the number of letters may vary according to the form of type. The price for manufacturing is 18 francs (14s. 4d.) per kilogramme (2 lb. 3 oz.) of pills covered. Our customers can have the raw materials sent to us by a wholesale drug house, or we will undertake to supply them. It is hardly necessary to add that an absolute discretion is guaranteed. **The Granules** comprise the doses of active principle for  $\frac{1}{2}$  milligramme, up to one centigramme exclusively. **The Pills** comprise all the other doses. Each bottle of Granules contains one hundred granules, viz.: 8 doz.  $\frac{1}{2}$ . Each bottle of Pills contains fifty pills, viz.: 4 doz.  $\frac{1}{2}$ .

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Glasgow University, 5th March, 1890.

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M. CHARTERIS, M.D.

*Professor of Therapeutics and Materia Medica,*  
Glasgow University.

To Messrs. A. & M. ZIMMERMANN,  
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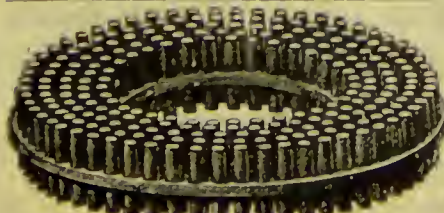
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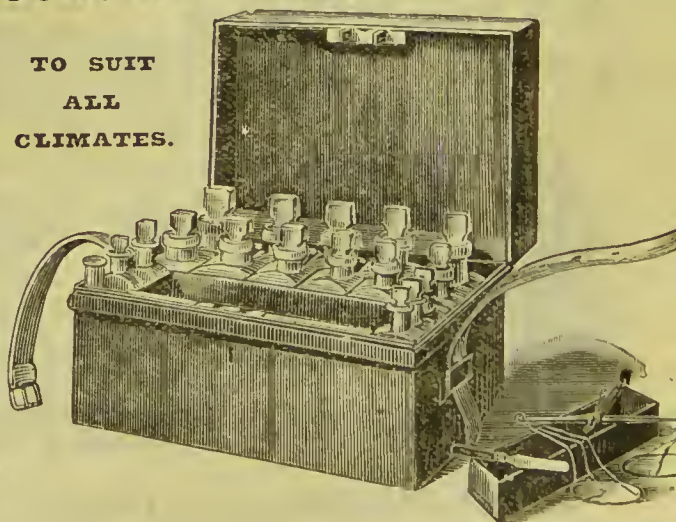
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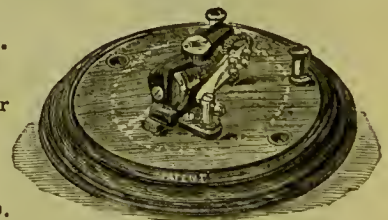
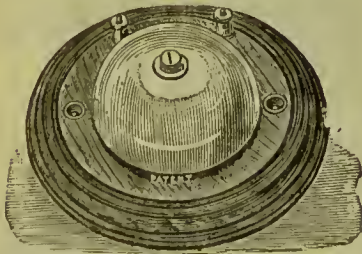
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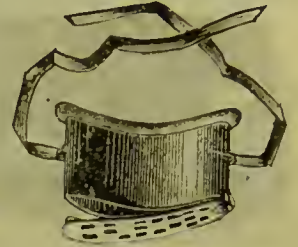
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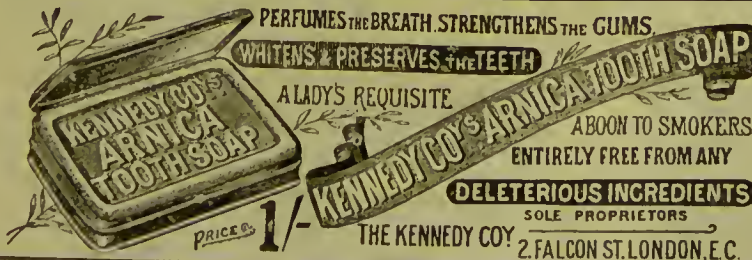
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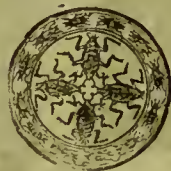
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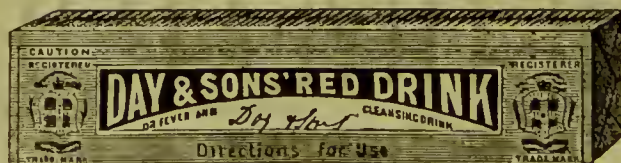
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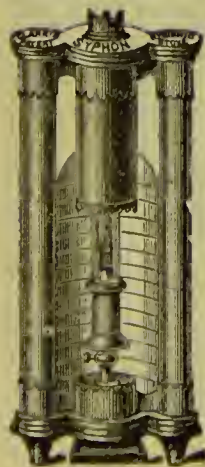
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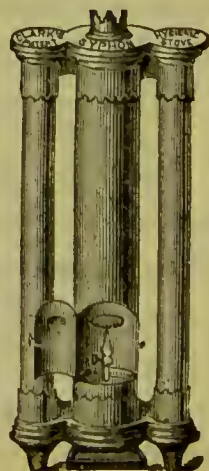
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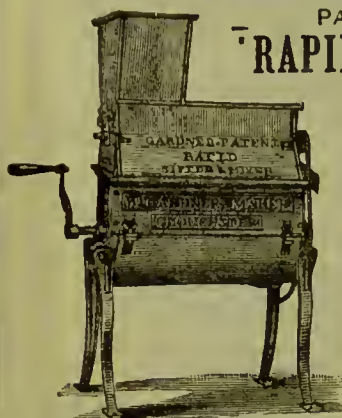
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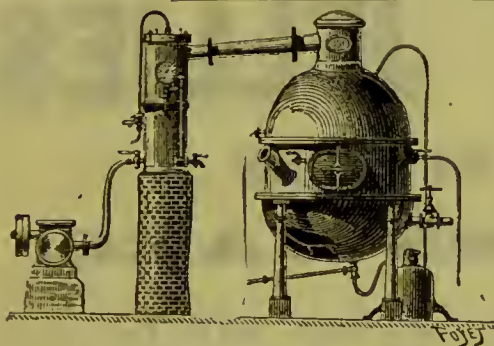
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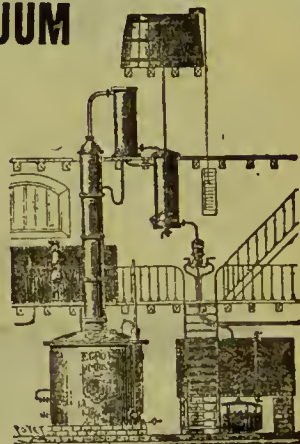
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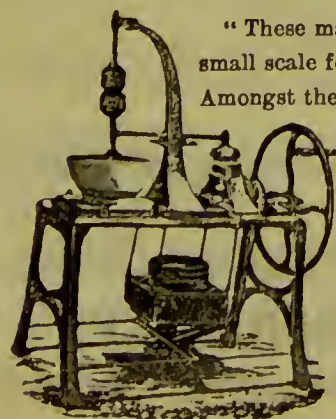
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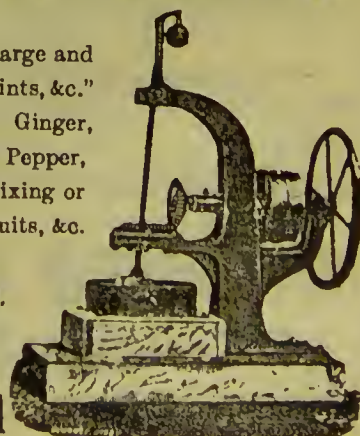


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